EFFECTIVENESS OF INFORMATION GUIDE REGARDING HOME CARE MANAGEMENT ON KNOWLEDGE AND POST DISCHARGE PROBLEMS OF POST-CABG PATIENTS AT SELECTED HOSPITAL IN CHENNAI

Dissertation submitted to

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

CHENNAI

In partial fulfilment of requirement for the degree of

MASTER OF SCIENCE IN NURSING

OCTOBER 2017

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LIST OF ABBREVIATIONS

ACS	-	Acute Coronary Syndrome
AHA	-	American Heart Association
AAD	-	Anastomosis Assist Devices
APAC	-	Asian-Pacific Countries
BHF	-	British Heart Foundation
BIMA	-	Bilateral Internal Mammary Artery
BRFSS	-	Behavioural Risk factors Surveillance System
BMI	-	Body Mass Index
CABG	-	Coronary Artery Bypass Graft
CAD	-	Coronary Artery Disease
CADI	-	Coronary Artery Disease in Asian Indians
CHD	-	Coronary Heart Disease
CMS	-	Centres for Medicare & Medicaid Services
CVD	-	Cardio Vascular Disease
CVRFs	-	Cardiovascular risk factors
DISH	-	Depression Interview and Structured Hamilton
DSWI	-	Deep Sternal Wound Infection
DM	-	Diabetes Mellitus
ESCORE	-	European System for Cardiac Operative Risk Evaluation Score
EVH	-	Endoscopic Vessel Harvesting
GBD	-	Global Burden of Disease
HDL	-	High Density Lipoprotein
HT	-	Hypertension
HADS	-	Hospital Anxiety and Depression Scale
HbA1c	-	Hemoglobin Glycolated
HOMA-2B	-	Homeostasis Model Assessment Beta cell function
HOMA-2IR	-	Homeostasis Model Assessment of Insulin Resistance
IHD	-	Ischemic Heart Disease
IMA	-	Internal Mammary Artery

LDL	-	Low Density Lipoprotein
LDL-C	-	Low Density Lipoprotein Cholesterol
MASS	-	Medication Adherence Scale Score
MOS	-	Medical Outcomes Study
MIDCAB	-	Minimally Invasive Direct Coronary Artery Bypass
NCQC	-	North Carolina Quality Center
NHS	-	National Heart Institue
NPCAD	-	Non Progressive Coronary Artery Disease
PCAD	-	Progressive Coronary Artery Disease
PCI	-	Percutaneous Coronary Intervention
QOL	-	Quality Of Life
RGEA	-	Right Gastro Epiploic Artery
ROW	-	Rest of the World
RCA	-	Root Cause Analysis
SCD	-	Sudden Cardiac Death
SF	-	Short Form health survey
SVG	-	Saphenous Vein Graft
SPSS	-	Statistical Package for Social Science
STS	-	Society of Thoracic Surgeons
WHO	-	World Health Organization
WTSA	-	Western Thoracic Surgical Association

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ABSTRACT

ABSTRACT

INTRODUCTION

Coronary artery disease (CAD) is the narrowing of the coronary arteries which supply oxygen and nutrients to the heart muscle. Coronary artery bypass graft surgery (CABG) re-routes blood flow around one or more blockages in the coronary arteries. This study aims to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems among CABG patients.

STATEMENT OF THE PROBLEM

An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems of post-Coronary Artery Bypass Graft patients at selected hospital in Chennai.

OBJECTIVES

1. To assess the post test knowledge and post discharge problems of CABG patients in experimental and control group
2. To assess the effectiveness of information guide regarding home care management of CABG patients on knowledge and post discharge problems between experimental and control group.
3. To identify the relationship between the post test knowledge and post discharge problems of CABG patients in the experimental and control group.
4. To associate the post test knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group.

METHODOLOGY

The research design used in this study was true experimental design and it was conducted in various Cardiac wards of Madras Medical Mission hospital, Chennai. The areas were allocated to both experimental and control group using simple random technique (lottery method). The Sample size of the study consisted of 60 CABG patients (30 in experimental group and 30 in control group) who were transferred from ICU and who fulfilled the sample selection criteria. The tools used for data collection were

structured interview questionnaire to assess the knowledge and checklist to assess the post discharge problems. The intervention tool was the information guide on home care management of CABG patients on various aspects using PPT.

RESULTS

- The overall post test knowledge of the experimental group revealed that in the experimental group 21(70%) had adequate knowledge, 9(30%) had moderately adequate knowledge and none of them had inadequate knowledge. In the control group, 7(23.33%) had moderately adequate knowledge, 15(50%) had fairly adequate knowledge, 8(26.67%) had inadequate knowledge and none of them had adequate level of knowledge on home care management of CABG patients.

  Considering the post discharge problems of CABG patients in the experimental group, 24(80%) had low level of post discharge problems and 6(20%) had moderate level of post-discharge problems and none of them had high level of post discharge problems. In the control group, 12(40%) had high level of discharge, 18(60%) had moderate level of post discharge problems and none of them had low level of post discharge problems.

- The findings revealed that the post test mean knowledge score of experimental group was 20.73 with the standard deviation of 2.32 and the post test mean knowledge score of control group was 8.67 with the standard deviation of 3.13. The calculated unpaired 't' value was **(t = 16.957 at p=0.000)** which indicated statistically significant difference between the experimental and control group.

  The analysis also revealed that the mean post discharge problems score of experimental group was 13.70 with the standard deviation of 4.03 and the mean post discharge problems score of the control group was 27.70 with the standard deviation of 2.98. The calculated unpaired 't' value was (**t = 15.298 at p=0.000)** which indicated statistically significant difference between the experimental and control group .

- The calculated Karl Pearson's correlation co-efficient 'r' value was **r= -0.670** which indicated the negative correlation which revealed that there was a statistically significant relationship between the knowledge on home care management and post

discharge problems which revealed that when the level of knowledge increases the post-discharge problems were found to be decreased.

- Considering the post test knowledge, the findings revealed that in the experimental group, there was statistically significant association between the level of knowledge and the demographic variable education **(χ^2=12.638 at p<0.05)** and history of chronic disease **(χ^2=8.825 at p<0.05)** and the other demographic variables had not shown statistically significant association with post test level of knowledge among CABG patients in the experimental group.

  Regarding the post discharge problems, the findings revealed that in the experimental group, there was statistically significant association between the level of post-discharge problems and the demographic variable gender **(χ^2=6.036 at p<0.05)** and monthly income **(χ^2=7.087 at p<0.05)** and the other demographic variables had not shown statistically significant association with post discharge problems among CABG patients in the experimental group.

  Whereas in the control group, the findings revealed that there was statistically significant association between the level of post discharge problems and the demographic variable type of family **(χ^2=5.000 at p<0.05)** and the other demographic variables have not shown statistically significant association with post discharge problems among CABG patients in the control group.

CONCLUSION

The findings revealed that the level of post test knowledge of CABG patients in experimental group was found to be adequate when compared to the control group. The findings also indicated that the post discharge problems were less among experimental group but high for the control group which showed the effectiveness of information guide regarding home care management of CABG patients. The study concluded that the information guide was effective in increasing the level of knowledge regarding home care management and reducing the post discharge problems among CABG patients.

INTRODUCTION

CHAPTER – 1

INTRODUCTION

"As knowledge increases, wonder deepens."

- Charles Morgan

Coronary artery disease (CAD), also known as the ischemic heart disease is the most common type of cardiovascular disease. It is the leading cause of death in both men and women. It may affect the individuals at any age but becomes more common at progressively older age. This may be secondary to combination of genetic predisposition and other environmental risk factors. Coronary artery disease reduces the blood supply to the heart due to narrowing and thickening of the arteries by plague deposition which is called as the atherosclerosis. The condition could be prevented by following diet, exercise and other life style modification which could prevent resulting in fatal condition.

CORONARY ARTERIES

Coronary arteries lie on the outside of the heart and carry oxygen rich blood to the heart muscle. The major coronary arteries are the right coronary artery, the left main coronary artery (which has branches into the left circumflex) and the left anterior descending artery. Many smaller arteries branch off.

CORONARY ARTERY DISEASE

Coronary artery disease (CAD) is the narrowing of the coronary arteries which supply oxygen and nutrients to the heart muscle. CAD is caused by a build-up of fatty material within the walls of the arteries.

SIGNS & SYMPTOMS OF CORONARY ARTERY DISEASE

- Chest pain or discomfort
- Fatigue
- Uncomfortable pressure, squeezing, fullness, or pain
- Palpitation

- Abnormal heart rhythm
- Shortness of breath
- Nausea & vomiting
- Light-headedness or fainting, or breaking out in a cold sweat
- Sleep problems, fatigue or lack of energy

Class I indications for CABG by the American Heart Association (AHA) are as follows

- Left main coronary artery stenosis >50%
- Stenosis of proximal LAD
- Proximal circumflex artery >70%
- Triple vessel disease

CORONARY ARTERY BYPASS GRAFT

Coronary artery bypass graft surgery re-routes blood flow around one or more blockages in the coronary arteries. This restores the blood supply to the heart muscle. Arteries or veins can be used as bypass grafts. The arteries used are the internal thoracic or internal mammary artery located inside of the breast bone. The radial artery located in the forearm can also be used. The most commonly used vein is the saphenous vein, located in the leg. The coronary arteries are not removed because they may still carry a small amount of blood to the heart muscle.

1.1 BACKGROUND OF THE STUDY

According to **World Health Organization** (**WHO) 2017** CVDs are the number one cause of death globally, more people die annually from CVDs than from any other cause. An estimated 17.7 million people died from CVDs in 2015, representing 31% of all global deaths. Of these deaths, an estimated 7.4 million were due to coronary heart disease and 6.7 million were due to stroke. Over three quarters of CVD deaths take place in low- and middle-income countries. Out of the 17 million premature deaths (under the age of 70) due to non-communicable diseases in 2015, 82% are in low- and middle-income countries, and 37% are caused by CVDs. Most cardiovascular diseases can be prevented by addressing behavioral risk factors such as tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol using population-wide strategies.

People with cardiovascular disease or who are at high cardiovascular risk (due to the presence of one or more risk factors such as hypertension, diabetes, hyperlipidaemia or already established disease) need early detection and management using counseling and medicines, as appropriate.

According to **American Heart Association (AHA) 2017, United States,** Cardiovascular disease, listed as the underlying cause of death, accounts for nearly 801,000 deaths in the US. That's about 1 of every 3 deaths in the US. About 2,200 Americans die of cardiovascular disease each day, an average of 1 death every 40 seconds. Cardiovascular diseases claim more lives each year than all forms of cancer and chronic lower respiratory disease combined. About 92.1 million American adults are living with some form of cardiovascular disease or the after-effects of stroke. Direct and indirect costs of cardiovascular diseases and stroke are estimated to total more than $316 billion; that includes both health expenditures and lost productivity.

Coronary Heart Disease is the leading cause (45.1 percent) of deaths attributable to cardiovascular disease in the US. Cardiovascular disease is the leading global cause of death, accounting for more than 17.3 million deaths per year in 2013, a number that is expected to grow to more than 23.6 million by 2030.

According to **Medical Research Council (MRC) 2016, United States** the number of CABG surgeries performed in the U.S. were 519,000, out of which 371,000 were performed on men and 148,000 on women. In addition, the estimates state that the number of CABG surgeries performed worldwide is more than 800,000 every year. Introduction of technologically advanced products such as Minimally Invasive Direct Coronary Artery Bypass (MIDCAB) or keyhole, Anastomosis Assist Devices (AAD), and Endoscopic Vessel Harvesting (EVH) devices are expected to propel the demand for CABG surgeries over the forecast period. MIDCAB is a less invasive method of CABG, which gains surgical access to the heart with a smaller incision. MIDCAB is off-pump technology and performed without using the heart-lung machine. MIDCAB offers benefits such as faster recovery from the disease, low bleeding & blood trauma, lower infection rate, and affordable surgery cost.

The key type segments analyzed into market are saphenous vein grafts, internal thoracic artery grafts and other grafts. Saphenous vein graft segment dominated the industry in 2016 and is expected to witness lucrative growth over the forecast period. Increasing preference for the Saphenous Vein Graft (SVG) over other vein grafts owing to various advantages such as being longer in length, ease in handling, and less transfusion requirement, have supported the market growth. The other graft segment is further segmented into radial artery and gastro epiploic artery. The Right Gastro Epiploic Artery (RGEA) is a suitable and an alternative conduit for coronary bypass surgery and is specifically used in patients who do not have appropriate saphenous veins to harvest for grafts.

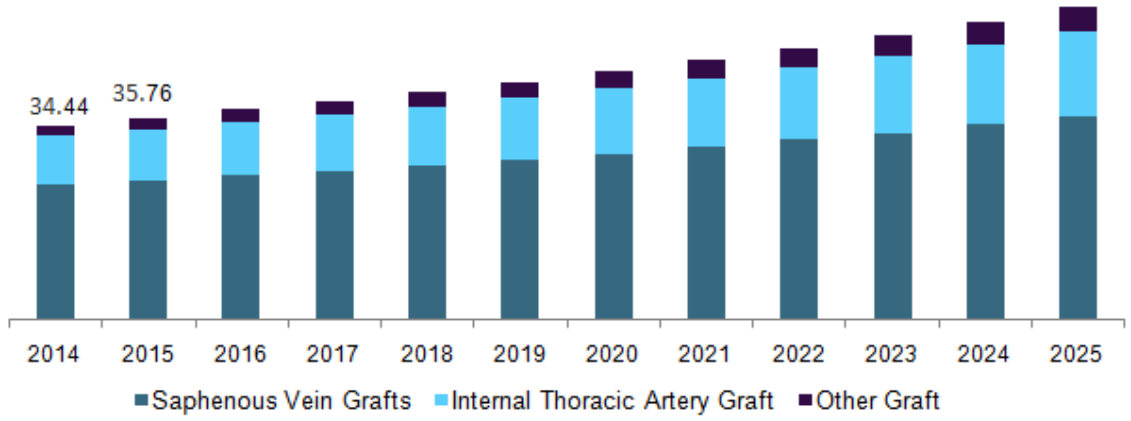


Fig.1.1: Coronary Artery Bypass Graft (CABG) market, by type, U.S. 2014 - 2025 (USD Million)

Source: Grand view research United States, 2017

According to **Global Dynamics Strategy of Surgical Interventional procedures (2016) United States,** the cumulative worldwide volume of the most prevalent cardiac surgeries and other cardiovascular procedures is projected to approach 15.05 million surgical and trans catheter interventions which includes coronary artery disease, roughly 4.73 million coronary revascularization procedures via CABG and PCI (or about 31.4% of the total) and close to 4 million percutaneous and surgical peripheral artery revascularization procedures (or 26.5% of the total). During the period 2016 to 2022, the total worldwide volume of covered cardiovascular procedures is forecast to expand on average by 3.7% per annum to over 18.73 million corresponding surgeries and transcatheter interventions in the year 2022.

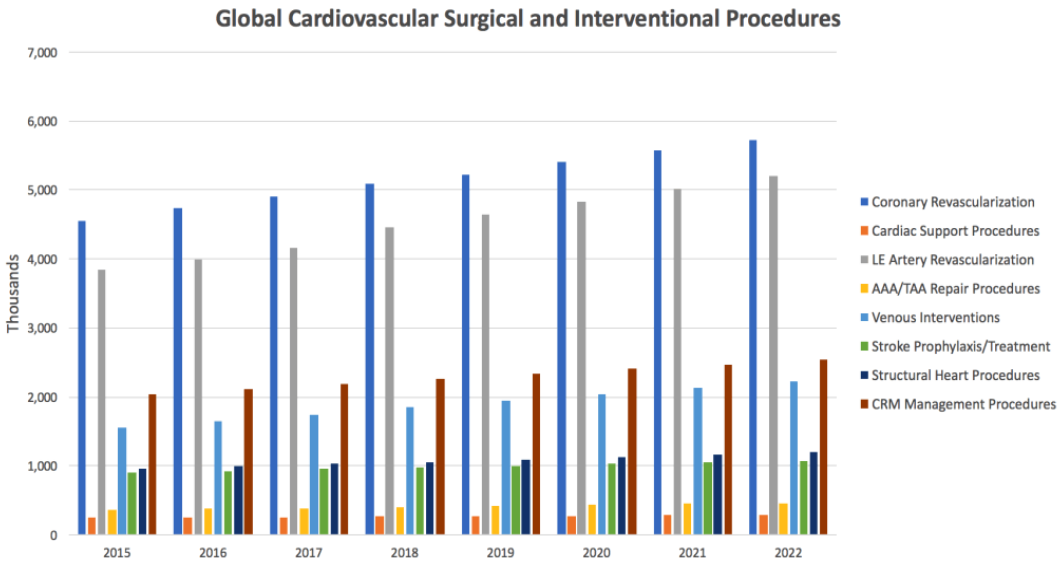


Fig.1.2: Global Dynamics of Surgical and Interventional Cardiovascular Procedures, 2015-2022

Source: Global Dynamics Strategy of Surgical Interventional procedures United States, 2016

According to **The Western Thoracic Surgical Association (2017) United States,** all isolated 36,588 CABG patients were evaluated (2006-2015) from a statewide Society of Thoracic Surgeons (STS) database collaborative. Patients were stratified by presence of postoperative complications including major morbidities as defined by the STS (prolonged ventilation, renal failure, reoperation, stroke, and deep sternal wound infection). About, 74.3% were male and average predicted risk of mortality was 1.9% with the age group of 64 years. A total of 24,738 (67.7%) patients experienced no complications at an average cost of $36,580. After accounting for incidence and incremental costs, institutions in collaboration have spent an estimated $59.1 million on prolonged ventilation, $8.3 million on renal failure, $7.6 million on reoperation, $3.3 million on stroke, and $256,000 on deep sternal wound infections within the first 30 days after surgery over the past 10 years. Perfect CABG without complication costs $36,580 on average. Major complications produce an exponential increase in costs and over the past ten years have totaled $78.6 million. As alternative payment models including bundled care are implemented, it is critical to understand the cost of adverse events to guide quality improvement projects, estimate true costs, and risk adjust payment models.

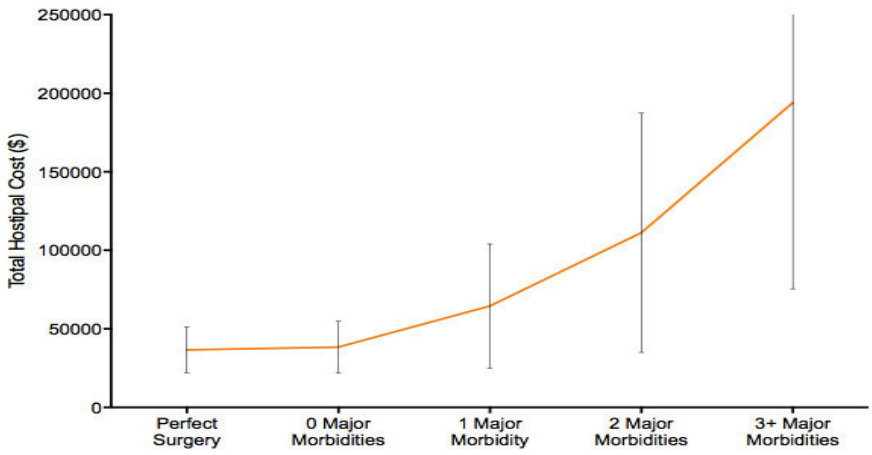


Fig.1.3: Cost of Individual Complications Following Coronary Artery Bypass Grafting, 2017

Source: The Western Thoracic Surgical Association United States, 2017

According to **National Heart Institute (NHS) 2016, Malaysia**, overall mortality related to CABG is 3-4%. During and shortly after CABG surgery, heart attacks occur in 5 to 10% of patients and are the main cause of death. The most common problem after surgery is the return of chest pain (angina). Severe angina may return shortly after bypass surgery in about 4 out of 100 people. After 5 years, about 4 out of 100 people need another operation. After 10 years, about 12 out of 100 people need another surgery. About 5% of patients require exploration because of bleeding. Surgery is usually less successful when it is repeated. The second surgery increases the risk of chest infection and lung complications. Stroke occurs in 1-2%, primarily in elderly patients. Mortality and complications increase with age (>70 years), poor heart muscle function, disease obstructing the left main coronary artery, diabetes, chronic lung disease, and chronic kidney failure. Care after surgery may include follow-up visits with doctors, lifestyle changes to prevent further progression of CAD, and taking medicines as prescribed. Wound infections after coronary artery bypass operations need to be diligently monitored. Therefore good indicator of a quality hospital is the rate of wound surveillance for isolated CABG cases.

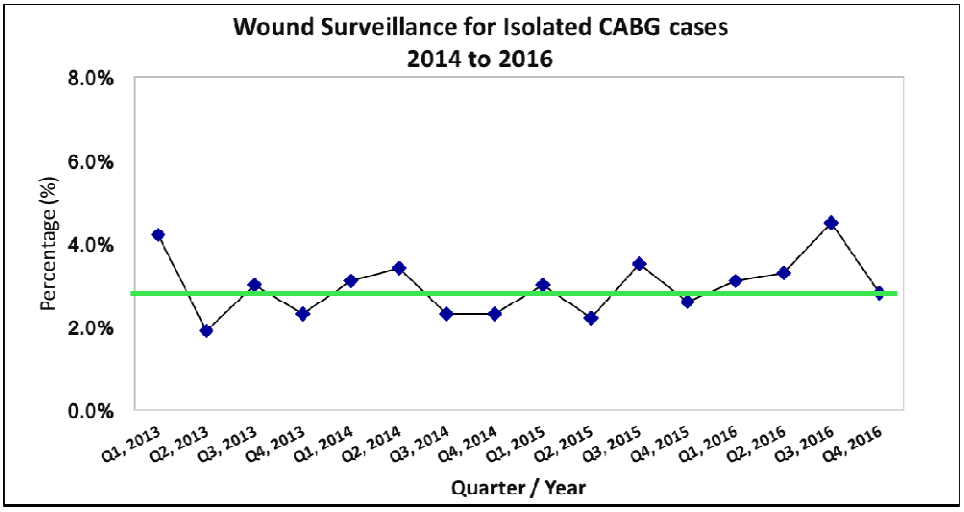


Fig.1.4: Institute Jantung Negara rates compare favourably with that of other international healthcare institutions, 2016

Source: National Heart Institute (NHS) Malaysia, 2016

According to **North Carolina Quality Center (NCQC) 2016, United States** safe and quality healthcare should be provided by the healthcare team members to the community for their improvement in journey of health. Medicare re-admission rates for CABG patients range from 12.7% to 17.7% at an average rate of 15%. Centers for Medicare & Medicaid Services (CMS) re-admissions penalties now include the readmission rates for patients undergoing CABG. Length of stay, optimization of respiratory status must be considered before discharging the patient. The factors that have an impact on readmission are education, clinic attendance, strength of family support, patients drive and desire to fully recovery and discharge destination. The common complications for readmissions are pleural effusions, pneumonia and stroke and wound infection. The prompt attention at the time of pre and post operative care followed by post discharge follow ups at home may reduce the risk of post operative complications.

According to **British Heart Foundation (2016) UK,** the annual statistical report on patient outcomes of cardiac rehabilitation programme at a local level in UK, the National Audit of Cardiac Rehabilitation (NACR) strategy reports key service indicators and patient outcomes at a local programme level that was assessed in both pre and post cardiac rehabilitation phase. Around 42% demonstrate average change following cardiac rehabilitation in smoking cessation, psycho-social health, Body Mass

Index (BMI) and exercise. However, a worrying 47% fail to meet national cardiac rehabilitation outcomes. The report indicates that high quality cardiac rehabilitation delivery could bring achievable outcomes.

According to **Coronary Artery Disease in Asian Indians (CADI) Research Foundation (2016),** Since Indians have been shown to have a higher risk factor burden at younger ages compared with Western populations, risk prediction models developed in Western countries may underestimate short-term CVD risk. The global burden of cardiovascular diseases (CVD) is rapidly increasing, predominantly due to a sharp rise in the incidence and prevalence of the same in the developing countries. India, a developing nation, is undergoing the same phase and is now in the middle of a coronary artery disease (CAD) epidemic. Over the past 30 years, the CAD rates have doubled in India whereas CAD rates have declined by 50% in most developed countries during the same period.

A tsunami of heart disease is now sweeping the Indian subcontinent. Over the past 4 decades, the prevalence of CAD quadrupled to 9-12% in urban India. Heart disease rate doubled to 3-5% in rural India but remain about half that of urban India. The two fold urban rural gradient and the 2-4 fold increase in CAD over the past 40 years among the people who share the same genetic pool suggests a powerful impact of lifestyle factors in the epidemic of heart disease in India. Asian Indian culture encourages over-consumption of salt, saturated fat, glycemic load, and reduced exercise. To make matters worse there are social, cultural and other major barriers to change.

In India, Kerala has the highest life expectancy (75yrs) which is 11 years higher than the national average of 64 years, and just 3 years less of (78yrs)s in the US. Naturally one would expect a lower prevalence of heart disease in Kerala. But due to lifestyle changes, diabetes 20%, high blood pressure 42%, high cholesterol (>200mg/dl) 72%, smoking (42% in men) and obesity (body mass index >25) 40%, physical inactivity 41%, unhealthy alcohol consumption 13% are paradoxically high and result in very high mortality and morbidity. The age-adjusted CAD mortality rates per 100,000 are 382 for men and 128 for women in Kerala. CAD in Kerala is premature and malignant resulting in death at a very young age. Approximately 60% of CAD deaths in men and 40% of

CAD deaths in women occur before the age of 65 years. The CAD death rates in Kerala are also higher than that of rural Andhra Pradesh and similar to urban Chennai.

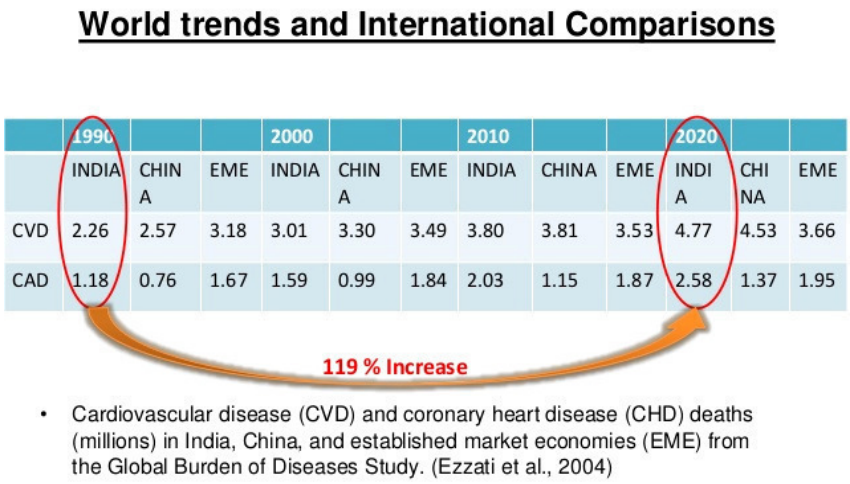


Fig.1.5: CVD and CHD death rate in India and Established Market Economics (EME) by the year, 2020

Source: Review of Global Burden of Diseases, 2016

Geographically, Asian-Pacific Countries (APAC) market accounts for slightly larger share of the global CVD procedure volume than the U.S. (29.5% vs 29,3% of the total), followed by the largest Western European states (with 23.9%) and Rest of the World (ROW) geographies (with 17.3%). Because of the faster growth in all covered categories of CVD procedures, the share of APAC can be expected to increase to 33.5% of the total by the year 2022, mostly at the expense of the U.S. and Western Europe. However, in relative per capita terms, covered APAC territories (e.g., China and India) are continuing to lag far behind developed Western states in utilization rates of therapeutic CVD interventions with roughly 1.57 procedures per million of population performed in 2015 for APAC region versus about 13.4 and 12.3 CVD interventions done per million of population in the U.S. and largest Western European countries.

Consequently, data from large studies had shown that modification of CVRFs is important not only in preventing progression of atherosclerosis following CABG, but also in improving survival in these patients. Knowledge of the prevalence pattern of

cardiovascular risk factors (CVRFs) in patients who are undergoing CABG is therefore essential for formulating appropriate strategy for post-operative management of these patients and for optimal use of resources. While there are several studies available from West regarding prevalence of conventional CVRFs in patients undergoing CABG. Today, cardiac hospitals in India perform over 100,000 open heart surgeries per year.

According to **The Society of Thoracic Surgeons (STS) 2016,** In **India** re-do surgeries are becoming more common than before. Seven years after then, Prime Minister Manmohan Singh underwent a second heart bypass surgery. Re-do surgeries are considered to be complex because of the tissue growth around the first surgery's scar, it takes up to three hours to just reach the heart for surgical intervention. Industry data suggests that of the roughly 2 lakh cardiac surgeries are performed in India every year, less than 1% are redo-bypass procedures. While the mortality associated with re-do surgeries in hospital stands 1.5 %, the corresponding data for the world as per STS data is 4.6%. Heart attacks are the leading cause of deaths across India. Experts say the incidence of heart disease has increased four fold in the last four decades. While the number of doctors performing heart surgeries has increased in the last two decades, there are still many patients in India's smaller cities and towns who fail hospitals in time.

Oyebola O et al (2016) conducted a cohort study to assess the primary and secondary outcome following cardiac surgery at the Frontier Lifeline Hospital, Chennai, India. Sample size of 291 patients who underwent cardiac surgery were selected. Three patients underwent CABG plus mitral or aortic valve replacement, whereas off-pump CABG was performed in three (2.22%) patients. Sixty-three complications were observed in 291 patients (21.64%); the most common complication was significant pleural effusion in 13 patients (4.47%), followed by deep sternal wound infection in 10 (3.44%) and respiratory failure in seven patients (2.41%). Thirty days peri-operative mortality was seen in 17 patients (5.84%). The study concluded that major complications are not uncommon after cardiac surgery. However, prompt and appropriate intervention may reduce mortality rate.

1.2 SIGNIFICANCE OF THE STUDY

Donald E et al (2016) conducted a study to assess the 90-day post discharge outcomes in cardiac surgery with an aim to develop predictive risk models for adverse events that occur during inpatient and post discharge care and then apply those models to define comparative hospital performance in cardiac surgery. The elective CABG and cardiac valve surgery patients were selected that met selection criteria in the United States. Logistic prediction models for inpatient deaths, inpatient prolonged length-of-stay, 90-day post discharge deaths without readmission, and 90-day readmissions among cardiac surgery patients were designed. Observed versus predicted differences for risk-adjusted adverse outcomes were then performed among all hospitals criteria. Median risk-adjusted adverse outcomes rates were 17% for coronary artery bypass and 20.4% for valve surgery in the best performing decile, but were 38.8% and 45.8%, respectively, in the poorest performing deciles. The study concluded that cardiac surgeries have dramatically different risk-adjusted outcomes over the 90 days following discharge, and demonstrate the opportunity for care improvement.

Brendan M et al (2016) conducted a study on long-term CABG survival to predict the performance of a long-term clinical risk model with that of an actuarial model to identify the clinical variable(s) most responsible for any differences. The data were collected using the Hannan New York state clinical risk model and an actuarial model long-term mortality for 1028 CABG patients. Linear regression analyses identified the subgroup of risk factors driving the differences observed. The findings revealed that mortality rates were 3%, 9%, and 17% at one, three, and five years, respectively. The clinical risk model provided more accurate predictions. The study concluded that long-term mortality clinical risk models provide enhanced predictive power compared to actuarial models. Using the Hannan risk model, a patient's long-term mortality risk can be accurately assessed and subgroups of higher-risk patients can be identified for enhanced follow-up care.

Meszaros K et al (2016) conducted a study to evaluate whether risk factors for sternal wound infections vary with the type of surgical procedure in cardiac operations. The surveillance study of 3,249 consecutive patients (28% women) with median age 69 years was conducted and median additive European System for Cardiac Operative Risk

Evaluation Score (ESCORE) was used for (a) isolated coronary artery bypass grafting (CABG), (b) isolated valve repair or replacement, and (c) combined valve procedures and CABG. Univariate and multivariate binary logistic regression were used to identify independent predictors for development of sternal wound infections. The findings revealed that 122 sternal wound infections (3.8%) in 3,249 patients. In patients undergoing CABG, not only procedure-related risk factors but also bilateral internal thoracic artery harvest and patient characteristics (female, sex, obesity, diabetes, chronic obstructive pulmonary disease) are predictive of sternal wound infection. The study concluded that preventive interventions may be justified according to the type of operation.

Mavra Mannan et al (2015) conducted a cohort study to assess the post operative complications in diabetics, who underwent CABG. The data were collected from 48 diabetic patients who underwent CABG for two months. The blood sugar levels of insulin dependent diabetics, who were given intermittent insulin infusion were monitored pre-operatively, intraoperatively and post-operatively. The patients were followed up for a period of two months for development of stroke and infections. The findings revealed that there was a significant association found between glycemic control and the incidence of stroke (2.08%) and infection (16.21%) with poor glycemic control in these patients. The study concluded that the incidence and risk of stroke, mortality and infection, though not remarkably high but was higher in patients with poor glycemic control within two months of CABG procedure.

Nakamura T (2014) conducted a study with an aim to make early diagnosis of sternal wound infection by repeated bacteriological examination. The sample size of 112 patients were subjected to bacteriological examination protocol including within 90 days after cardiothoracic surgery. Univariate and multivariate analyses demonstrated that bilateral mammary artery use (95% $p = 0.043$), positive blood culture for Staphylococcus aureus (95% $p < 0.0001$), repeat bacteremia (95% $p = 0.004$) were risk factors that were associated for sternal wound infection. The study concluded that repeat blood cultures in febrile patients appear to be useful for the early detection of Staphylococcus aureus and repeat bacteremia, and these were associated with sternal wound infection.

Harlan M. Krumholz (2013) conducted a study to describe the frequency of and diagnoses associated with Emergency Department (ED) visits and hospital readmissions within 30 days of discharge after CABG surgery and to compare outcomes across hospitals in California. 63,911 adults who underwent isolated CABG surgery at 114 hospitals were identified. Hospital 30-day, risk-standardized ED visit without readmission rates nearly equaled the hospital 30-day risk-standardized readmission rates. Both outcomes varied widely among hospitals. A composite of these outcomes, the median 30-day risk-standardized hospital-based, acute care rate was 23.9%. Postoperative infections, congestive heart failure, and chest discomfort were among the most common reasons for both readmissions and ED visits. The study concluded that patients discharged after CABG surgery frequently experienced ED visits and hospital 30 days, often for similar diagnoses. Monitoring both hospital readmissions and ED visits after CABG surgery is important to our understanding of hospital-based, acute care needs after discharge.

Suad Jassim et al (2013) conducted a descriptive study to assess the early and late complications that occur in patients with cardiovascular-coronary grafts as well as find a relationship with some demographic specifications for them at Ibn Al-Bitar Teaching Hospital, Baghdad. Sample sizes of 50 were selected. Patients recovery was evaluated initially in the first phase, after 48 hours from ICU and in the second phase during the periodic review and follow up. Data was collected using the questionnaires and through the interview. The data were analyzed using descriptive and inferential statistical methods. The findings revealed that the most of the sample were male, smokers, people with high blood pressure and has significant association with the demographic variable educational level. The study concluded that early complications such as chest wound infection and breathing difficulties occurred in patients with cardiovascular-coronary grafts and recommended that an educational program to provide a video or manuals containing instructions can be followed by patients in pre and postoperative to avoid complications.

Cebeci F, Cellk SS (2008) conducted a study on discharge training and counseling increase self-care ability and reduce post- discharge problems in CABG patients, explained how discharge training and counseling provided to patient, who had undergone CABG surgery, had effects on patient's self-care ability and on the problems

encountered after discharge. This study was prospective and quasi experimental. The intervention and control group consisted of 57 patients who were given discharge training and counseling by a researcher with the help of information booklet developed for training purposes and 52 patients who were given routines by a nurse, respectively. Data were collected by researcher using the personal information form, the self-care agency scale. It was found that the intervention group had higher mean self-care scores than the control group and experienced fewer problems following discharge compared with patients in the control group. The discharge training and counseling services from the day of hospitalization had a positive impact on self care and alleviation of the problems that patients encounter after being discharged.

In MMM Hospital daily about 4-5 patients undergo CABG. The researcher during her clinical posting and from her personal experience of working in cardio-thoracic unit found most of the patient got re-admitted for secondary wound complications due to various risk factors after discharge. The researcher had come across different studies done on discharge training and counselling programe that minimized the risk of complications. Hence the researcher observed that there is a need to give discharge counselling and teaching regarding home care managements which includes the instructions that has to be followed at home in order to improve their knowledge and prevent the post operative complications after discharge. And so the researcher planned to conduct a study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of CABG patients at selected hospital in Chennai.

TITLE

"Effectiveness of information guide regarding home care management on knowledge and post discharge problems of post-CABG patients at selected hospital in Chennai."

1.3 STATEMENT OF THE PROBLEM

An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems of post-coronary artery bypass graft patients at selected hospital in Chennai.

1.4 OBJECTIVES OF THE STUDY

1. To assess the post test knowledge and post discharge problems of CABG patients in experimental and control group
2. To assess the effectiveness of information guide regarding home care management of CABG patients on knowledge and post discharge problems between experimental and control group.
3. To identify the relationship between the post-test knowledge and post discharge problems of CABG patients in the experimental and control group
4. To associate the post test knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group.

1.5 OPERATIONAL DEFINITION

Effectiveness

It refers to the change in the level of knowledge regarding home care management of CABG patients and post discharge problems of CABG patients after administering the information guide.

Information guide

It refers to the systematically planned instructions on home care management of CABG patients that has to be followed after discharge. Informations regarding incisional care, healthy diet, exercises, activities, life style modifications, returning to job, resuming sexual activity and follow up care using PPT was highlighted and a printed booklet which covered all the above components was provided on the third post operative day for further reference.

Home Care Management

It refers to the care which should be provided to the CABG patients at home after discharge from the hospital.

Knowledge

It refers to the awareness of information regarding home care management of CABG patients.

Post discharge problems

It refers to the problems experienced by the CABG patients during the post operative period for one month after surgery and discharge from the hospital.

Post-CABG patients

Patients who underwent surgical treatment coronary artery bypass graft for coronary artery disease for reperfusion of coronary arteries based on the percentage of blocks as evidenced by coronary angiogram report. The bypass graft can be taken from the hand or leg.

1.6 ASSUMPTION

1. CABG patients need to have adequate information on home care management
2. Information guide enhances the knowledge of CABG patients and reduces the post discharge problems experienced by patient.

1.7 NULL HYPOTHESES

NH_1: There is no significant difference in post test level of knowledge and post discharge problems of CABG patients between experimental and control group.

NH_2: There is no significant relationship between post-test level of knowledge and post discharge problems of CABG patients in experimental and control group.

NH_3: There is no significant association between level of knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group.

1.8 DELIMITATION

The study was delimited to

1. A period of one month of data collection.
2. Patients who underwent coronary artery bypass graft surgery.
3. Coronary artery bypass graft patients in Madras Medical Mission (MMM) Hospital.

1.9 CONCEPTUAL FRAMEWORK

GENERAL CONCEPTS OF WIEDENBACH'S HELPING ART OF CLINICAL NURSING THEORY:

According to Wiedenbach, nursing is a result of deliberative actions taken by the nurse rather than rational or reactionary responses. It is nurturing and caring for someone in a motherly fashion. Nursing is a helping service that is rendered with compassion and strong understanding for those in need of care, counsel and confidence in the area of health.

Prescriptive theory postulates that the nurse performs goal directed actions. The theory consists of three factors.

1) **Central purpose**
2) **Prescription**
3) **Realities in immediate situation**

The nurse develops prescription based on the central purpose and implements in accordance to the needs of the patient.

1) **Central purpose:** The quality of health, the nurse desires to sustain in her patient and specifies what she recognizes to be her special responsibilities in caring for the patient.
2) **Prescription:** Nature of action that will most likely lead to fulfillment of nurse's central purpose.
3) **Realities:** Factors influencing the fulfillment of central purposes.

Wiedenbach defines five realities namely

a) Agent: Is a practicing nurse who engages in innumerable acts.
b) Recipient: Patient who has personal attributes problems, capabilities, aspiration and abilities to cope.
c) Goal: Desired outcome nurse wishes to achieve for her patient.
d) Means: Activities and devices through which practitioner is enabled to attend her goal.
e) Framework: context with in which nursing goal is practiced.

According to Wiedenbach, nursing practice consists of:

1. **Identification**
2. **Ministration**
3. **Validation**

1. Identification:

Identification involves viewing the patient as an individual with unique experiences and understanding the patient's perception of the condition. The nurse determines the patient's need for help, based on the presence of the need, the patient's awareness of the need, and the ability of the patient to meet the need by himself.

2. Ministration:

Ministration refers to the plan for administering the needed help. The nurse uses the available resources and formulates a plan to meet the need identified. The nurse analyses what the patient thinks, knows, can do and has done plus what the nurse thinks, knows, should do and has done. The nurse presents the plan to the patient and the patient responds to it.

3. Validation:

Validation refers to a collection of evidence that shows the patient needs have been met and his functional ability has been restored as a direct result of nurse's action.

APPLICATION OF MODIFIED WIEDENBACH'S HELPING ART OF CLINICAL NURSING THEORY FOR THE PRESENT STUDY:

Prescriptive theory for nursing is described as concerning a desired situation and ways to attain it. The theory enables goal directed actions.

Nursing practice consists of:

1. Identification
2. Ministration
3. Validation

1) Identification:

a) **Observation of patient:** In the identification, component nurse observes the patient looking for inconsistency, attempts to clarify the inconsistency, and finally identifies the needed help. In this study, the nurse researcher assessed

the demographic variables age, gender, marital status, religion, education, occupation, monthly income, type of food, type of family and history of chronic disease.

b) **Central purpose**: The nurse desire is that to minimize the post discharge problems of CABG patients.

c) **Prescription**: Nurse's direction to achieve the central purpose and decides to administer the information guide regarding home care management of CABG patients.

2) Ministration:

Here the nurse implemented the practitioner directed intervention by administering the information guide regarding home care management of CABG patients for the experimental group. The patients in the control group were administered the routine hospital care instructions and discharge advise.

3) Validation:

Here the nurse validated whether the administration of the information guide regarding home care management of CABG patients was effective or not. She assessed the level of knowledge using structured interview questionnaire regarding home care management of CABG patients and the level of post discharge problems by means of checklist. Post test was conducted on the day of discharge and while the patient is getting discharged, a checklist was administered to the experimental and control group to assess the post discharge problems and the instructions were given to the patient to mark the check-list whenever patient had any problem after going home. Patients were followed up over telephone weekly and after 4 weeks of duration, the post discharge problems were obtained for both the experimental and control group.

Nursing is a practice of analyzing a patient's need for help through observation of presenting symptoms and risk factors, exploration of the meaning of those symptoms with the patient, determining the cause of discomfort and determining the patient's ability to resolve the discomfort or the patient's need for help from the nurse or other healthcare professionals. Thus by adopting the modified Wiedenbach's helping art theory, the nurse researcher was able to bring out the changes in the level of knowledge there by decrease in the level of post discharge problems of CABG patients.

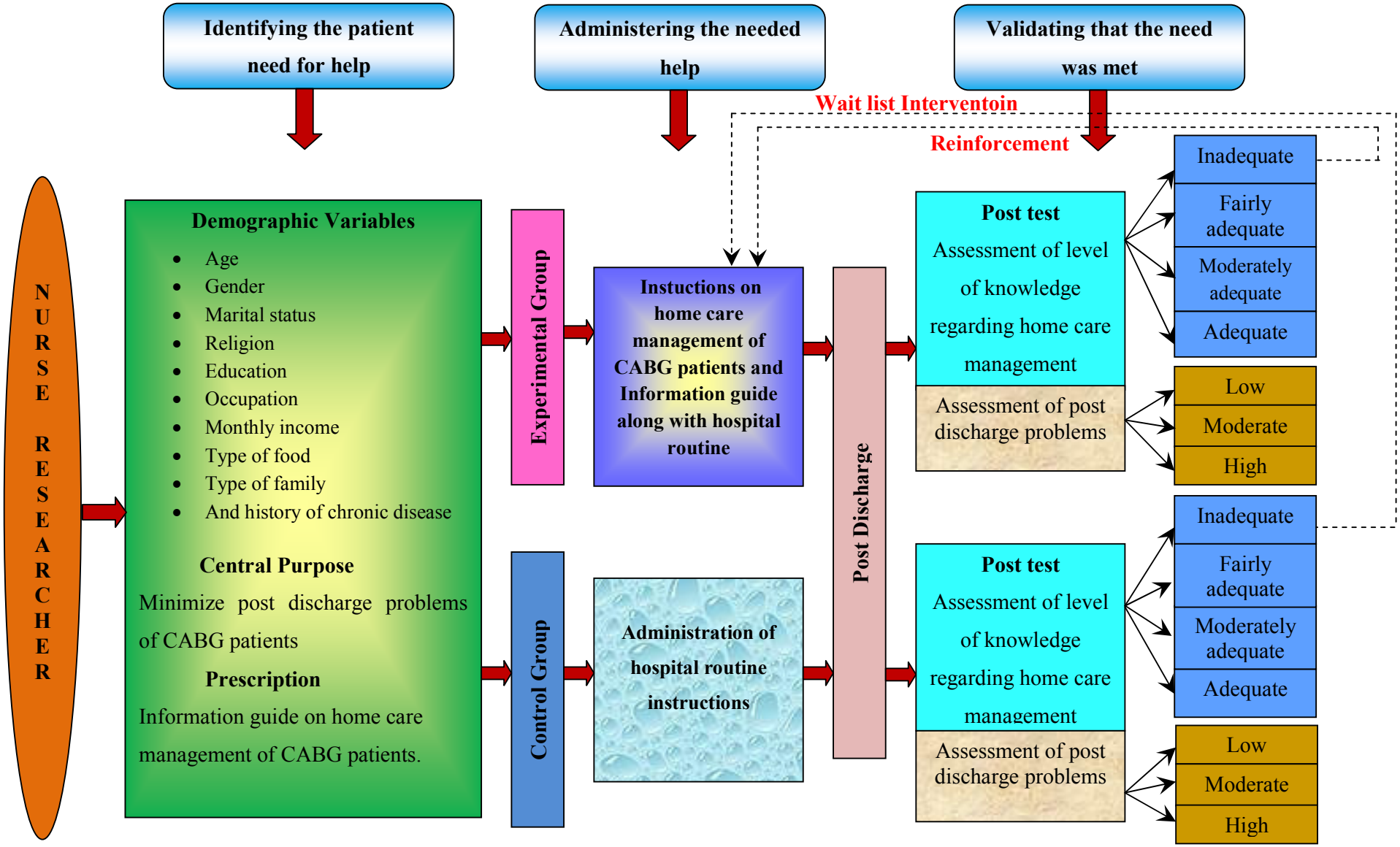


Fig.3.1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED WIEDENBACH HELPING ART OF CLINICAL NURSING THEORY

REVIEW OF LITERATURE

CHAPTER – 2

REVIEW OF LITERATURE

Review of literature is a systemic search of published work to gain information about a research topic. Through the literature review, researcher generates a view about what is known about particular situation and lays foundation for the research plan. It provides a background for the current knowledge on the topic and illuminates the significance of the study. The present review was based on extensive surveys of books, journals and international nursing studies to develop deep insight into the problem.

The collected research reviews were grouped under following headlines

SECTION A: Reviews related to coronary artery disease and coronary artery bypass graft surgery.

SECTION B: Reviews related to the knowledge on home care management of CABG patients.

SECTION C: Reviews related to post discharge problems after coronary artery bypass graft surgery.

SECTION D: Reviews related to discharge training and counseling after coronary artery bypass graft surgery.

SECTION A: REVIEWS RELATED TO CORONARY ARTERY DISEASE AND CORONARY ARTERY BYPASS GRAFT SURGERY.

Zachariasardóttir S et al (2017) conducted a nationwide cohort study on sudden cardiac death and coronary disease among young people with an aim to examine the differences in clinical characteristics and autopsy findings of the heart in Denmark. In this study 197 autopsied CAD-SCD case report and medical records from general practitioners and hospitals were obtained. The findings revealed that there was a male predominance (76%) with the median age group of 42years of which 51% had a shockable rhythm and 9 cases returned to spontaneous circulation briefly. Victims aged 36-49 years had severe atherosclerosis in multi-vessels (29%) and less commonly acute coronary occlusion (38%) and victims also had cardiac symptoms prior to death (68%). The study concluded that the tragic death could be prevented among the victims aged 18-35years and 36-49 years by identifying the early cardiac symptoms and the

several differences in the pathologic lesions of the heart associated with different disease progression.

Rajeeva Rivikath Pieris (2016) conducted a study to identify the prevalence of risk factors in patients who were undergoing for CABG at a single center in Oman. Sample sizes of 146 CABG patients with the age group of 31 to 87 years old were included and data were obtained from history and laboratory investigations. The prevalence rates of eight conventional risk factors were presented as a retrospective single center observational study. The findings revealed that the most common risk factor were hypertension (81.51%), followed by dyslipidemia (78.77%), male gender (73.29%), diabetes mellitus (54.11%), smoking (47.95%), obesity (21.23%) and positive family history (13.01%) and (87.7%) had three or more risk factors. The study concluded that the most common combination of risk factors seen together were diabetes, hypertension, dyslipidemia and male gender.

Mendonca km et al (2015) conducted a qualitative exploratory study on patient's perception about coronary artery bypass grafting among pre-operative CABG patients in the city of Salvador, Bahia, Brazil. The aim of this study was to assess the difficulties experienced by individuals awaiting coronary artery bypass grafting and to determine strategies that facilitate adaptation to a new lifestyle, modified by the disease. A semi-structured interview was performed to verify the representativeness, homogeneity and pertinence of the data obtained (pre-analysis), followed by separation of categories of analysis. The findings revealed that patients experience a wide range of psychological difficulties, considering that surgery acquires interpretations that vary according to individual's subjectivity. The study revealed that through modification of the biomedical model the care for a biopsychosocial view will help the patients to confront the hospitalization more positively.

Célia Bittencourt et al (2014) conducted a study on association of classical risk factors and coronary artery disease in type II diabetic patients submitted to coronary angiography. A sample size of 347 individuals with type II DM and 94 normoglycemic controls were selected and studied for BMI, blood pressure, fasting plasma glucose, HbA1c, lipids, HOMA, adiponectin, Framingham risk score, number of clinically significant coronary lesions (stenosis > 50%). The homeostasis model assessment of

insulin resistance (HOMA-2IR) and β-cell function (HOMA-2B) were calculated using glucose and insulin levels. The findings revealed that among type II DM subjects, those with CAD had worse glycemic control with fasting glucose($p = 0.004$) HbA1c $p = (0.03)$ lower HDL ($p = 0.003$), and higher triglycerides ($p = 0.002$), LDL ($p = 0.037$) and less often goals for HDL ($p = 0.04$), when compared to CAD-free normoglycemic individuals. The study concluded that glycemic control is progressively associated with number and extent of coronary lesions in patients with type II DM.

Hoang M Lai et al (2011) conducted a study on risk factor reduction in the progression of coronary artery disease with an aim to identify differences between the patients with PCAD and NPCAD in an outpatient cardiology practice. Chart reviews were performed in patients receiving two or more cardiac catheterizations at least one year apart. Medication use, serum LDL-C and blood pressure were used for analysis. The findings revealed that, after the average follow-up duration of 11years, the mean arterial pressure was higher in PCAD than in NPCAD ($p<0.05$) and Serum LDL-C level was insignificantly higher in PCAD ($p=0.09$). There was no difference in medical therapy of patients with and without PCAD. The study concluded that in addition to using appropriate medical therapy, aggressive control of blood pressure and serum LDL-C level may reduce progression of CAD.

Imre Janszky (2010) conducted a 37 year follow-up study of 49, 321 young Swedish men between the age of 18 to 20 years. Some of the co-variants in the study were smoking, alcohol consumption and basal metabolic index. The men who received a diagnosis of depression were associated with increased level of alcohol consumption. Those who received a diagnosis of anxiety were associated with higher blood pressure. There was a prospective association between CAD and anxiety. The study also proved that early onset of anxiety is a strong marker for CAD evens an ACS.

SECTION B: REVIEWS RELATED TO THE KNOWLEDGE ON HOME CARE MANAGEMENT OF CABG PATIENTS.

Carin Alm-Roijer (2014) conducted a descriptive study to investigate if knowledge of risk factors for CHD, measured by a questionnaire, would show any relation to advice to compliance to lifestyle changes to attain treatment goals and adherence to drug therapy. The samples were selected as Men and women <71 years

who had a cardiac event were screened consecutively (509) from the medical records. Responders (392) were interviewed, examined and received a questionnaire. 347patients answered the questionnaire regarding their general knowledge of risk factors for CHD, compliance to lifestyle changes to attain treatment goals and adherence to drug therapy. The findings revealed that there were statistically significant correlations between general knowledge about risk factors for CHD and compliance to certain lifestyle changes. The study concluded that the knowledge correlates to patients behavior with respect to some risk factors, which should be recognized in preventive programs.

Senthilkumar et al (2013) conducted a multi-national survey to assess the knowledge and attitude towards cardiac rehabilitation among patients with coronary artery disease. The sample size was 60 patients selected by non-probability purposive sampling technique. The data was collected using cardiac rehabilitation knowledge inventory and attitude scale. The findings revealed that among all the respondents, 81.6% were aged over 50 years, 48.30% were above 60 years. Two third were males (66.66%) and one third were females (33.34%). Out of 60 respondents, half of them 50% (n=30) had average knowledge and 46.67 % (n=28) had poor knowledge regarding cardiac rehabilitation. Only 03.33% (n=2) possess good knowledge regarding cardiac rehabilitation. Most of the respondents, 78.33% (n=47) have a positive attitude and 21.67% (n=13) had neutral attitude towards cardiac rehabilitation. Age, educational qualification and economic status were found to be associated with knowledge and only religion was associated with attitude.

Suzanne Fredericks et al (2010) conducted a systematic review to examine the most benefit from postoperative education. The sample included 58 studies involving 5,271 participants with the age group of <50 years. The findings indicated that delivery of postoperative patient education through the individualization of content, use of combined media for delivery, provision of education on a one-on-one basis, and in multiple sessions is associated with improvement in educational/health outcomes. The results highlighted the importance of attending to the characteristics of both the elements of postoperative educational interventions and the individual patients in the design and delivery of patient education.

Aida Nahapetyan et al (2007) conducted a cross sectional study to investigate the prevalence of non-adherence to medication and lifestyle changes and knowledge about post-operative risk factors among patients with CABG with the sample size of 300. Simple random sampling was used to create the list of study population. The data were collected through telephone interviews, study instrument MASS to measure adherence to medication and BRFSS was used to measure diet, physical activity and smoking status. Knowledge about post operative risk factors were assessed by asking question about post operative risk factor. The findings revealed positive association between patients knowledge and adherence towards diet and smoking cessation. The study concluded that with results of previous studies allows us to recommend additional patient education measures to address the gap in knowledge of postoperative risk factors among CABG patients.

SECTION C: REVIEWS RELATED TO POST DISCHARGE PROBLEMS AFTER CORONARY ARTERY BYPASS GRAFT SURGERY.

Lommerud S (2017) conducted an experimental study with an aim to examine whether the use of a graduated compression stocking for 4-6 weeks after CABG can prevent leg infection. The data were collected from the hospital's patient registry and surveillance system for surgical site infections from 377 consecutive CABG patients. Logistic regression was used to determine the odds of surgical site infection in patients at two surgical wards adhering to opposite practices regarding the use of compression stocking. The findings revealed that there was no significant relationship between post operative infection rate and compression stocking routine. The study concluded that the use of graduated compression stocking does not reduce the incidence of harvest site surgical wound infection.

Jacek Piątek (2017) conducted a retrospective cross-sectional study with an aim to identify preoperative risk factors for postoperative complications in CABG patients. In the study 388 patients $\geq$ 80 years and 190 patients $\leq$ 50 years were analysed who underwent CABG consecutively. The data were obtained from medical records. The findings revealed that emergent admission was the only factor increasing the occurrence of any postoperative complications among patients $\leq$ 50 years. On the other hand, among patients $\geq$ 80years emergent admission was not associated with any postoperative complications. The study concluded that postoperative complications were more

common among elder patients and individuals with risk factors should be carefully evaluated and closely monitored to prevent post-operative complications.

Freundlich RE et al (2016) conducted a study on mortality rate after CABG to find the associations between complications and attributable death. The data were collected from patients undergoing isolated CABG and a follow-up for 20years was done. The findings revealed that postoperative mortality rate was 0.79% at 30 days, 2.85% at 180 days, and 6.38% at 2 years. At a median follow-up of 9.8 years, 21.6% patients had died and postoperative complications occurred in 3,438 patients (39.2%). The study concluded that acute cardiac arrest, reoperation for other cardiac reasons, new dialysis, atrial fibrillation, and prolonged mechanical ventilation were associated with the largest increase in attributable deaths. Prevention and treatment of these complications may reduce the mortality rates after cardiac operations.

Sharif-Kashani B et al (2016) conducted a study with an aim to investigate the association of smoking and the wound healing problems in CABG patients. The incidence of leg and sternal wound complications were evaluated during the first 7 days as well as at a 6-week of post-operative visit among 405 smokers and 405 nonsmokers who underwent an elective CABG surgery. The findings revealed that the overall rate of leg wound healing disturbances was significantly higher in smokers than those in nonsmokers ($P = 0.010$). The overall rate of sternal wound healing disturbances was similar between smokers and nonsmokers ($P = 0.03$). The study concluded that smoking may contribute to the disturbances of wound healing, especially wound dehiscence, in CABG patients.

Shifa Manhal (2015) conducted a cross-sectional survey to determine the occurrence of shoulder disorders among CABG patients and to explore the associated factors. In this study, 45 postoperative CABG patients were recruited. The data were collected regarding demographic data, operative data, pre and post-operative physiotherapy management and the occurrence of shoulder disorders by face-to-face interview method using a specialized questionnaire. The findings revealed that occurrence of shoulder disorders among CABG patients were found (36%) at the time point 3-4 months after CABG. There was no significant association found between age, gender and performance of upper limb exercises and the occurrence of shoulder

disorders. The study concluded that the high occurrence of shoulder disorder was crucial and so rehabilitation professionals can take essential steps to assess and treat these complications in the immediate postoperative period and continue the same following discharge from the hospital.

Sajja lr et.al (2014) conducted a study on Strategies to reduce Deep Sternal Wound Infection (DSWI) after bilateral internal mammary artery grafting. Several risk factors have been identified with sternal wound infections and a few are modifiable. Strategies that reduce DSWI target the modifiable risk factors that include microbiological factors, appropriate antibiotic prophylaxis and tight glycemic control. Surgical strategies to reduce DSWI following Bilateral Internal Mammary Artery (BIMA) harvest include techniques of Internal Mammary Artery (IMA) harvesting with lesser revascularization of sternum using skeletonized, semiskeletonized and modified pedicle harvest that are associated with greater preservation of sternal blood supply and sternal closure and stability techniques. The findings revealed that the prevalence is more after CABG using single IMA graft. The study concluded that BIMA harvesting carries a higher risk of sternal infection than harvesting single IMA.

Nakamura T (2014) conducted a study with an aim to make early diagnosis of sternal wound infection by repeated bacteriological examination within 90 days after cardiothoracic surgery with the sample size of 112 patients. Univariate and multivariate analyses demonstrated that bilateral mammary artery use (95% $p = 0.043$), positive blood culture for Staphylococcus aureus (95% $p < 0.0001$), repeated bacteremia (95% $p = 0.004$) were risk factors that were associated for sternal wound infection. The study revealed that repeat blood cultures in febrile patients appear to be useful for the early detection of Staphylococcus aureus and repeat bacteremia, and these were associated with sternal wound infection.

Manupreet Kaur (2013) conducted a exploratory comparative study to assess Quality Of Life (QOL) and lifestyle of patients before and after CABG was carried at selected hospital of Punjab. Survey design with sixty patients who came for follow up three months after CABG were selected using purposive sampling technique. The data were collected using standardized WHO-BREF questionnaire to measure quality of life and structured lifestyle questionnaire for measuring lifestyle. The study findings

indicated that mean of quality of life before CABG was higher than mean of quality of life after CABG. Whereas no significant difference was found in lifestyle before and after CABG. Quality of life was found to be significant associated with educational status, monthly income, and marital status and also the lifestyle was found to be significantly associated with gender, monthly income, and educational status. The study concluded that QOL and lifestyle affect each other as better lifestyle results in better QOL.

Heilmann C (2013) conducted a single-centre study with an aim to analyse current wound healing complications after median sternotomy. All adult patients undergoing a median sternotomy were selected and microbiological results of standardized wound swabs were obtained. The findings revealed that superficial healing disorders occurred in 43 patients (3.3%), while 33 (2.5%) developed deep wound complications. Six patients with sternal wound complications (7.9%) died in-hospital. In 7 patients, no pathogen was identified and the wound appeared uninfected. Risk factors for all deep sternal wound complications were insulin-dependent diabetes mellitus, COPD and reoperation. Microbial swabs of the sternal wound were taken in 82 of the 1297 patients (6.6%). All deep polymicrobial infections involved coagulase-negative Staphylococci. The study revealed that redo and emergency operations are the most important risk factors in this contemporary series.

Javier Escaned (2012) conducted a study on secondary revascularization after CABG surgery. Inspite multiple improvements in surgical technique and patient treatment, graft failure after CABG surgery occurs in a time-dependent fashion until 2010. Repeated revascularization by either percutaneous coronary intervention (PCI) or surgical techniques were performed in high-risk patients in the absence of specific recommendations in clinical practice guidelines. In this review, graft failure after CABG surgery is examined as a clinical problem from the perspective of holistic patient management.

Emil L et al (2013) conducted a study on rates and predictors of repeat coronary revascularization after CABG in the modern era. The samples were selected who were undergoing first-time isolated CABG with age group ≥65 years of were selected. After linking to Medicare claims data, long-term outcomes of CABG were examined by use of

cumulative incidence curves. The study findings revealed that the overall 18-year survival rate were 20%. Cumulative incidences of any repeat revascularization were 2%, 7%, 13%, and 16% at 1, 5, 10, and 18 years after surgery, respectively. There were approximately 2-fold variations in repeat revascularization rates across centers at 1 year and 5 years. The study concluded that repeat revascularization was performed infrequently among older CABG patients.

Ahmed D (2011) conducted a study with an aim to determine the pre and peri operative risk factors for infection in patients undergoing coronary artery bypass surgery at a tertiary care hospital in a developing country. The data was collected by 12 reported risk factors for all patients undergoing CABG. Of the total cases of infection following CABG, 59 required prolonged hospitalization or readmission. Multivariate analysis with adjusted Relative Risk (RR) showed that diabetes (95%), obesity (95%), use of an intra aortic balloon pump (95%), female gender (95%) and prolonged mechanical ventilation (95%) were independent predictors of infection in the study population. The study suggested that early and strict diabetic control and pre-operative weight reduction may reduce the incidence of infection following CABG.

Natalia E Morone (2010) conducted a randomized control study with an aim to assess the impact of co-occurring pain and depression in patients undergoing CABG at Pittsburgh. The data was collected using Medical Outcomes Study (MOS) 36-Item Short Form Health Survey (SF-36), Depression Interview and Structured Hamilton (DISH). The findings revealed that depressed CABG patients self-reported significantly more bodily pain as compared to non depressed patients consistently over the 12-month period following surgery. The study concluded that treating one but not the other could result in a suboptimal post-surgical outcome. The lack of interaction between treatment and pain in the presence of significant main effects further supported the need for novel interventions in cardiac populations.

SECTION D: REVIEWS RELATED TO DISCHARGE TRAINING AND COUNSELING AFTER CORONARY ARTERY BYPASS GRAFT SURGERY

Negarandeh R et al (2015) conducted a quasi experimental study to evaluate the impact of discharge plan on satisfaction with nursing care, ability to self-care, and incidence of re-admission. In the intervention group, the discharge plan was initiated at

the time of admission and continued for two weeks after discharge by home visit and telephone follow ups and the patients ability for self-care for 6 weeks and 3 months during post discharge period. The findings revealed that satisfaction levels with nursing care and the ability to take self-care were higher in intervention group comparing with control group ($p < 0.001$). There was a significant difference for self-care ability between pre test and post test in both groups but the improvement was more pronounced for the intervention group ($p = 0.04$). The study concluded that the discharge plan, as a method of continual care plan, can lead to higher satisfaction levels and enhanced self-care abilities of patients and can be utilized as an effective method of continuous care for patients who are going to undergo CABG.

Masoumeh Akbari (2015) conducted a semi experimental study with an aim to to investigate the effect of planned discharge training and counseling on the problems experienced by patients undergoing CABG surgery which was performed on 100 patients undergoing CABG surgery. The intervention groups were provided with adequate discharge training and counseling with a booklet before surgery and counseling until 6 weeks after discharge, while the control group patients received only routine clinical procedures. The data were analyzed using Statistical Package for the Social Sciences (SPSS). The findings revealed that due to the education programs, problems were found fewer in the intervention group than in the control group ($P < 0.05$). The study concluded that discharge training and counseling given to the intervention group had a positive impact on decreasing the post operative problems and recommended to support multidisciplinary patient training and counseling action.

Lytsy B et al (2015) conducted a study on hygienic interventions to decrease deep sternal wound infections following coronary artery bypass grafting. The aim of the study was to show how RCA followed by quality improvement interventions reduced the rate of DSWI after CABG surgery. The data were collected from isolated CABG patients requiring surgical revision due to DSWI. Swabs and tissue biopsies were taken during surgical revision and analysed with standard methods. Interventions based on results of the RCA and on nationally recommended practices were carried out. Air was actively sampled at ≤0.5m from the sternal incision. The findings revealed that DSWI incidence rates per CABG operations decreased from 5.1% pre intervention to 0.9% post intervention and concluded that a systematic

quality improvement intervention based on the RCA may reduce the number of deep sternal wound infections after CABG surgery.

Garrett N. Coyan et al (2015) conducted a study on diet and exercise interventions in CABG patients with a goal to identify long-term outcomes. Long-term exercise habits after CABG with the sample size of 163 participants were observed. The findings revealed that higher levels of exercise were associated with increased functional status, as measured by the validated functional status questionnaire, $p<.01$ and strict dietary recommendations were followed by 20% of samples and 36.6% were not followed. The study concluded that diet and exercise lifestyle modifications have a potential significant role in improving CABG outcomes, with the goal of effective secondary prevention of CAD, reducing hospitalizations and repeat revascularization procedures, and decreasing overall health care costs.

Olga Kadda et al (2015) conducted a study with an aim to explore the role of nursing education after a cardiac event or procedure. The studies regarding cardiac rehabilitation highlighted the value of nursing support in cardiac rehabilitation programs. In particular, there is an amount of evidence that a nurse led educational program is closely associated with reduce rate of complications, of anxiety following cardiac events and readmissions to hospital. Moreover, the therapeutic lifestyle-change intervention into a nursing program effectively modifies cardiac risk factors and improves prognosis. The study concluded that benefits of nursing support in cardiac rehabilitation patients can improve health outcomes and reduce the risk of a new cardiac event. It is of most importance for nurses to meet the rehabilitative care needs of patients through education, support, supervision and reinforcement.

Mozhgan Taebi et al (2014) conducted a qualitative study with an aim to determine patients perception of the need for self-management following CABG surgery. The data were collected by interviewing 25 patients who underwent CABG surgery one year prior to the study. Data were analyzed by descriptive qualitative content analysis. The study findings revealed that participants had different perceptions regarding the need for self-management based on three themes, “reflective thinking,” “information revision,” and “beliefs influences”. The study concluded that patients perceptions vary,

regarding the need for self-management. The difference in perception should be the basis for training programs to guide CABG patients for successful self-management.

Engblom E (2013) conducted a study with an aim to investigate whether rehabilitation influences quality of life and work status after CABG. Consecutive patients undergoing elective CABG were randomly assigned to a rehabilitation group (R, N = 119) and a hospital-treatment group (H N = 109). All patients received usual medical care. Group R participated in a rehabilitation program based on exercise and counseling. The follow-up time was 5 years. The Nottingham health profile as a measure of perceived distress was used. The findings revealed that increase in the proportion of subjects working was higher in group R than group H at 3 years after the CABG, but not at other follow-up times. The result concluded that a cardiac rehabilitation program in conjunction with usual medical care after CABG may induce a perception of improved health. The influence on return to work is limited.

Gallagher et al (2011) conducted a descriptive study with an aim to describe the types and frequency of problems when recovering at home in the first 6 weeks following CABG surgery and the relationship between symptom experience and psychological distress at a tertiary hospitals in Sydney. Sample sizes of 52 women were selected by using convenience sampling technique. The data were collected by telephone interview at 1, 3 and 6 weeks post discharge using a semi structured questionnaire. Psychological distress was assessed at 12 weeks post discharge using the Hospital Anxiety and Depression Scale (HADS). The findings revealed that approximately one-quarter of the women still reported chest incision pain and almost 40% reported problems with leg wounds and edema which was significantly correlated with depression at 12 weeks. The study concluded that preoperative education programme in the early transition period following hospital discharge is very important.

Perk J et.al (2010) conducted a case control study on effects of cardiac rehabilitation after coronary artery bypass grafting on readmissions, return to work, and physical fitness on 49 consecutive CABG patients (10 female, 39 male) participating in a comprehensive rehabilitation programme and were compared with 98 individually matched double control patients, receiving standard care during the first year after CABG, fewer study group patients, readmitted to hospital ($p < 0.01$) and on fewer

occasions ($p < 0.05$), patients used anxiolytic drugs ($p < 0.01$). The study findings revealed that the study group had a tendency to a greater increase in work capacity, as compared with the values obtained at the pre operative exercise test that it improved the quality of life of our patients as it entailed fewer readmissions and reduced the use of anxiolytic medication; in addition it promoted physical fitness and training habits.

Cebeci F,Cellk SS (2008) conducted a prospective and quasi experimental study on discharge training and counseling increase self-care ability and reduce post- discharge problems in CABG patients, explained how discharge training and counseling provided to patient, who had undergone CABG surgery, had effects on patient's self-care ability and on the problems encountered after discharge. The intervention and control group consisted of 57 patients who were given discharge training and counseling by a researcher with the help of information booklet developed for training purposes and 52 patients who were given routines by a nurse, respectively. Data were collected by researcher using the personal information form, the self-care agency scale. It was found that the intervention group had higher mean self-care scores than the control group and experienced fewer problems following discharge compared with patients in the control group. The study revealed that discharge training and counseling services from the day of hospitalization had a positive impact on self care and alleviation of the problems that patients encounter after being discharged.

Durhan and Gold (2008) conducted a study on late complications of cardiac surgery. 259 consecutive open heart patients were followed pre operatively and post operatively with questionnaires to assess changes in quality of life. 80% patients documented improvement. Pre operative patients characteristics play an important role in post operative improvement. Five hundred and twenty nine patients were followed at six months after elective bypass surgery for physical and mental health improvement. Of these, 73.2% had improvement in physical health and 41.6% in mental health.

Tseng LH (2007) conducted a cross sectional study on investigation of the diet preferences of patients with metabolic syndrome who underwent CABG surgery at a general hospital in northern Taiwan to explore the diet preferences of post CABG patients with metabolic syndrome. A total of 104 samples recruited and given a respondent demographics questionnaire and Chinese food frequency questionnaire. The

findings revealed that post operative patients had less vegetables and milk and more fried food and used cooking oil more frequently. The study concluded that patients after CABG surgery take more vegetables with less fried food and cooking oil and recommends that more information can be provided about post operative diet education for medical staff and help patients and their families consume a diet richer in healthy foods.

Rosane Maria Nery et al (2007) conducted a study to evaluate the frequency changes and the influence of physical activity practice in pre and postoperative period of CABG patients. The sample sizes of 55 patients submitted to CABG were divided into active and sedentary regarding physical activity practices. The study findings revealed that 17(59%) sedentary patients in the preoperative period presented complications post operatively compared to 8 (31%) active patients ($p = 0.04$). The hospital length of stay among sedentary patients versus active patients preoperatively was 15 and 12 days ($p=0.03$), respectively. The study concluded that the patients physically active had a shorter hospital length of stay and a lower number of both trans and postoperative complications within one year and hence the physical activity practice in the preoperative stage is important for the best outcomes of CABG.

Nel E, Uys HH (1993) conducted a quasi experimental study on effectiveness of pre-operative teaching on the emotional attitude of patients undergoing CABG. An analysis of the data indicated a significant difference between the groups that followed the programme and groups that did not follow the programme. The study findings revealed that programme has a positive influence on the life-style functioning of the patient and will thus promote the process of rehabilitation. The study concluded that the life style functioning of the patients can be improved by means of a pre-operative rehabilitative educational programme by the professional nurse.

METHODOLOGY

CHAPTER – 3

RESEARCH METHODOLOGY

This chapter deals with the methodology adopted for the study. It includes the research design, variables, setting, population, sample and criteria for selection of the sample, sample size, sampling technique, development of the tool and description of the tool, content validity, pilot study, reliability of the tool, data collection procedure and plan for data analysis.

3.1 RESEARCH APPROACH

A research approach is an applied form of research that involves finding out how a specific program, practice, procedure or policy is working well (Polit & Hungler).

Quantitative research approach was adopted for this study to accomplish the objectives of the study.

3.2 RESEARCH DESIGN

It refers to the overall plan for obtaining answer to the research questions and for testing the research hypothesis (Polit & Hungler).

The research design used for this study was true experimental design comprising of randomization, manipulation and control in order to validate the outcome of the study.

<table>
<tr><td rowspan="3">sRANDOMIZATION</td><td>GROUP</td><td>INTERVENTION
×</td><td>POST TEST
O_1</td><td rowspan="3">Assessment of post discharge problems after 4weeks of surgery through telephone interview.</td><td>CHECKLIST TO ASSESS POST DISCHARGE PROBLEMS
O_2</td></tr>
<tr><td>Experimental group
N= 30</td><td>Instuctions on home care management with PPT presentation for 30-40min on 3rd POD and information guide along with hospital routine.</td><td rowspan="2">Assessment of post test level of knowledge regarding home care management of CABG patients</td><td rowspan="2">Assessment of level of post discharge problems of CABG patients after discharge from the hospital.</td></tr>
<tr><td>Control group
N= 30</td><td>Hospital routine instructions</td></tr>
</table>

3.3 VARIABLES

3.3.1 Independent variable

The independent variable of the study was Information guide on home care management of CABG.

3.3.2 Dependent Variable

The dependent variable of the study was knowledge and post discharge problems regarding home care management among CABG patients.

3.3.3 Background Variable

Demographic variables consisted of parameters such as age, gender, marital status, religion, education, occupation, monthly income, type of food, type of family and history of chronic disease.

3.4 RESEARCH SETTING

The study was conducted at Madras Medical Mission Hospital, Chennai. It is a 500 beded multispeciality hospital. With regards to cardiology department, it has 225 bedded cardiothoracic unit which consists of Cath lab, cardiac OT, adult ICU , step-down ICU and cardiac wards. Approximately on an average of about 125 open heart surgeries are performed every month. The researcher conducted the study at general ward and post operative special wards receiving patients after the coronary artery bypass graft surgery from Intensive Care Unit.

3.5 POPULATION

Population is the entire aggregation of clients with similar characteristics and on whom the researcher would generalize the study findings. The population encompasses the target population and accessible population.

3.5.1 Target Population

All the patients who had undergone coronary artery bypass graft surgeries at the hospitals in Tamil Nadu.

3.5.2 Accessible Population

All the patients who had undergone coronary artery bypass graft surgeries at Madras Medical Mission (MMM) hospital.

3.6 SAMPLE

All the patients who had undergone coronary artery bypass graft surgeries at Madras Medical Mission (MMM) hospital and who fulfilled the sample selection criteria.

3.7 SAMPLE SIZE

The sample size of the study consisted of 60 CABG patients (30 in experimental group and 30 in control group) who were transferred from ICU and who fulfilled the sample selection criteria.

3.8 SAMPLING TECHNIQUES

Sampling technique refers to the process of selecting a group of people events and other elements that are representative of the population being studied (Polit & Hungler).

The surgery list of all the cardiac patients posted for the surgery was collected on daily basis from the cardiac ward by the researcher. Then as the patients were received to cardiac post-operative ward from AICU, the samples that fulfilled the selection criteria were selected by simple random sampling technique using lottery method.

3.9 CRITERIA FOR SAMPLE SELECTION

3.9.1 Inclusion Criteria

1. Patients with age group of 30 yrs and above.
2. Both male and female patients.
3. Patients who were conscious.
4. Patients undergoing CABG surgical treatment for the first time.
5. Patients who were able to read and write Tamil and English.

3.9.2 Exclusion Criteria

1. Patients who had prior knowledge regarding home care management like medical professionals.
2. Patients who were not willing to participate.

3.10 DEVELOPMENT OF THE TOOL

The tools used for data collection was developed after a thorough review of literature, opinions from experts and from personal experience.

DESCRIPTION OF THE TOOL

The tool for data collection consists of two sections.

Section A: Assessment Tool

The assessment tool used for data collection was structured interview questionnaire to assess the level of knowledge and a checklist to assess the post discharge problems of CABG patients. The assessment tool consists of three parts:

Part 1: Demographic variables which include the age, gender, marital status, religion, education, occupation, monthly income, type of food, type of family and history of chronic disease.

Part 2: Structured interview questionnaire to assess the level of knowledge regarding home care management of CABG patients. It consists of 25 questions which includes the following aspects such as general considerations, incisional care, dressing, diet, exercise, activities, driving, travelling, life style modifications, stress management, resuming sexual activities and follow-up care. Each correct answer was given a score of 1 and a score of 0 for the wrong answer. The total score of the tool was 25. The score were then converted into percentage and interpreted as below

SCORING AND INTERPRETATION

SCORING IN %	LEVEL OF KNOWLEDGE
$\leq$ 25%	Inadequate
26-50%	Fairly adequate
51-75%	Moderately Adequate
$\geq$76%	Adequate

Part 3: Checklist to assess the post discharge problems experienced by CABG patients after discharge. The checklist consists of list of 37 post discharge problems which are commonly experienced by the CABG patients under 10 categories like respiratory system, cardio-vascular system, gastro-intestinal system, incisional site, pain, neurological, psychological, social, sleep and others.

Presence of any problem at any given point from the third post operative day till the completion of fourth week of post operative period is considered to have post discharge problems. For each problem identified, for the presence of problem and a score of 1 was given, and for absence of problem, a score of 0 was given. The total score of the tool was 37. The higher score revealed the presence of more post discharge problems. The scores were then converted into percentage and interpreted as below

SCORING AND INTERPRETATION

SCORE	POST DISCHARGE PROBLEMS
0-12	Mild
13-24	Moderate
25-37	Severe

Section B: Intervention Tool

Intervention Tool: Information guide on home care management of CABG patients using power point presentation. It is the systematically planned instructions on home care management of CABG patients that has to be followed after discharge. Informations regarding incisional care, healthy diet, exercises, activities, life style modifications, returning to job, resuming sexual activity and follow-up care were highlighted by using power point presentation for 30-40 minutes for each participant. The information guide which covered all the above components were provided on the third post operative day.

3.11 VALIDATION OF THE TOOL

Content validity is the degree to which the items in the instrument adequately represent the content for the concept being measured. Content validity of the tool was established by panel of experts comprising in the field of cardio vascular surgery,

medical and surgical nursing and statistics. The expert's suggestions were incorporated in designing the final tool for the study after consulting with the guide.

3.12 ETHICAL CONSIDERATION

Ethics is a system of moral values that is concerned with the degree to which the research procedures adhere to the professional, legal and social obligations to the study participants.

The study was carried out after obtaining an ethical clearance from the ethical committee of MMM Hospital. The following ethical principles were followed in the course of study.

ETHICAL PRINCILPLE	ACTION CARRIED OUT
Principle of beneficence	The study was done to improve the level of knowledge regarding home care management of CABG patients. It was found that they were benefited out of the study.
Principle of respect for human dignity	Those who were willing to participants were selected as samples for the study and right to withdraw was ensured before data collection.
Principle of confidentiality	The information regarding the samples and their performance were kept confidential.
Principle of informed consent	Informed consent were obtained from all the participants selected for the study.

3.13 PILOT STUDY

The pilot study was conducted after obtaining ethical committee clearance from the Madras Medical Mission Hospital. A formal written permission was sought from the Director of cardio thoracic surgery and Medical Superintendent. Official information was given to Nursing Superintendent, Incharges of cardiac post operative general and special wards.

The researcher selected the CABG patients who fulfilled the sample selection criteria out of the total post operative cardiac patients. Out of which 6 participants were selected using simple random sampling (lottery method). A brief explanation was given to the patient and the oral and written consents were obtained from the participants.

On the third post operative day, the information guide on home care management of CABG were administered along with teaching using PPT. On the day of discharge a structured interview questionnaire were administered to assess the knowledge on home care management of CABG patients. While going home, participants were given a checklist to assess the post discharge problems and the instructions were given to the participants to mark in the form whenever the patient experiences any problem after going home.

Participants were followed up over telephone weekly. The same procedure was followed with control group but teaching intervention and Information guide was not provided. But they were provided with the hospital routine instructions and discharge advise.

The collected data were tabulated for analysis. The pilot study done showed the effectiveness of information guide regarding home care management thereby increasing the level of knowledge and reducing the post discharge problems among CABG patients that is evident as per the objectives framed. The result of the pilot study gave the evidence that the tool was found to be reliable, feasible and practicable to conduct the main study.

3.14 RELIABILITY

Reliability is the degree of consistency with which an instrument measures the target attribute for which it was designed to measure. It is the major criterion for assessing the quality and adequacy of an instrument (Denise F.Polit & Cheryl Tatano Beck).

The reliability for the knowledge tool was assessed by using test-retest method, where r=0.85 and the reliability for the post discharge problems was assessed by using

inter-rater method, where r=0.87.The reliability was checked by using the Karl Pearson correlation coefficient.

3.15 DATA COLLECTION PROCEDURE

The data collection was conducted after obtaining ethical committee clearance from the Madras Medical Mission Hospital. A formal written permission was sought from the Director of Cardio Thoracic Surgery and Medical Superintendent. The official information was given to Nursing Superintendent, Incharges of cardiac post operative general and special wards.

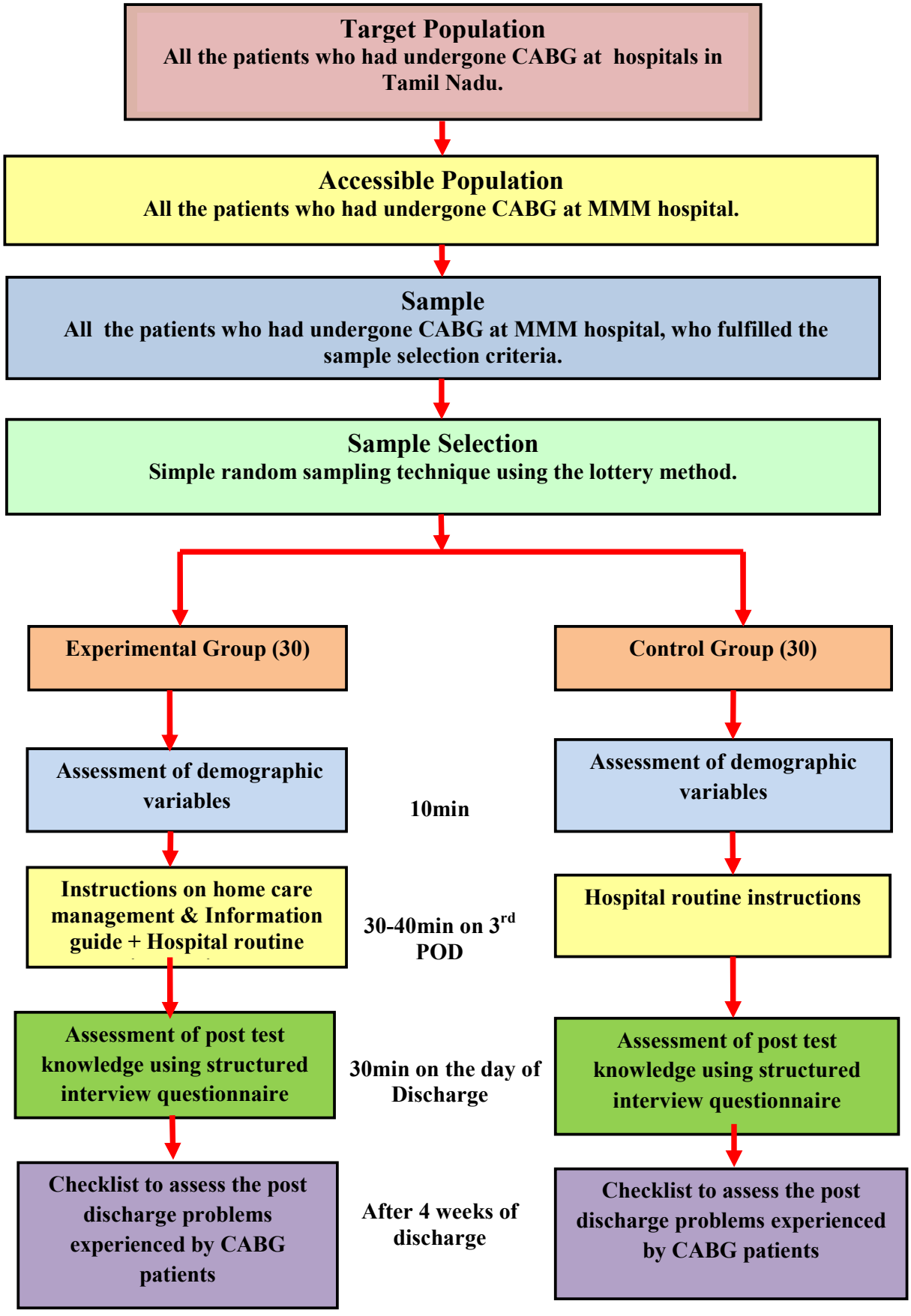
Participants were selected and allocated to experimental and control group by using lottery method. The samples were given adequate explanation about the self and the study. Written and oral consent were obtained from both the patients and their relatives. Confidentiality about the responses were assured.

Phase 1: Demographic data of the selected sample were collected on the third post operative day followed by the experimental group where the information guide was administered, along with the hospital routine care. The patients were explained about the different components of post operative care such as general considerations, incisional care, dressing, diet, exercise, activities, driving, travelling, life style modifications, stress management, resuming sexual activities and follow up care using PPT for 30-40 minutes of duration. For the control group, hospital routine care, instructions and discharge advice were given.

Phase 2: On the day of discharge a structured interview questionnaire were administered to assess the post test level of knowledge on home care management of CABG patients for both the experimental and control group.

Phase 3: While the patient is getting discharged, a checklist were administered to the experimental and control group to assess the post discharge problems and the instructions were given to the patient to mark the checklist whenever patient had any problem after going home. Patients were followed up over telephone weekly and after 4 weeks of duration, the post discharge problems were obtained for both the experimental and control group.

Fig.3.1: Schematic representation of data collection procedure



3.16 PLAN FOR DATA ANALYSIS

Data were analyzed using descriptive and inferential statistics.

3.16.1 Descriptive Statistics

1. Frequency and percentage distribution was used to analyze the demographic data of CABG patients.
2. Frequency, percentage distribution, mean and standard deviation was used to assess the knowledge and post-discharge problems of CABG patients.

3.16.2 Inferential Statistics

1. Unpaired‘t’ test was used to assess the effectiveness of information guide on home care management in experimental and control group.
2. Correlation Coefficient was used to identify the relationship between knowledge and post discharge problems of CABG patients in experimental and control group.
3. Chi-square test was used to associate the post test knowledge and post-discharge problems of CABG patients with their selected demographic variables in experimental and control group.

DATA ANALYSIS AND INTERPRETATION

CHAPTER – 4

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data collected from the sixty participants to assess the effectiveness of information guide regarding home care management of CABG patients on knlowledge and post discharge problems in experimental and control group at MMM hospital, Chennai.

The data collected was organised, tabulated and analysed according to objectives. The findings based on the descriptive and inferential statistical analysis are presented under the following sections.

SECTION A: Assessment of demographic variables of CABG patients of experimental and control group.

SECTION B: Assessment of level of post test knowledge and post-discharge problems of CABG patients in the experimental and control group.

SECTION C: Assessment of effectiveness of information guide on knowledge on home care management and post discharge problems of CABG patients in the experimental and control group.

SECTION D: Assessment of relationship between post test knowledge and post discharge problems of CABG patients in the experimental and control group.

SECTION E: Assessment of association of post test knowledge on home care management and post discharge problems of CABG patients with their selected demographic variables of experimental and control group.

SECTION A: ASSESSMENT OF DEMOGRAPHIC VARIABLES OF CABG PATIENTS OF EXPERIMENTAL AND CONTROL GROUP.

Table 1: Frequency and percentage distribution of demographic variables of CABG patients in the experimental and control group.

N = 60

Demographic Variables	Experimental Group		Control Group		Chi-Square Value
	No.	%	No.	%	
Age					χ^2=3.342 d.f=2 p = 0.188 N.S
30 - 40 yrs	0	0.00	0	0.00	
41 - 50 yrs	4	13.33	3	10.00	
51 - 60 yrs	16	53.33	10	33.33	
>60yrs	10	33.33	17	56.67	
Gender					χ^2=0.741 d.f=1 p = 0.389 N.S
Male	26	86.67	28	93.33	
Female	4	13.33	2	6.67	
Marital status					-
Married	30	100.00	30	100.00	
Single	0	0.00	0	0.00	
Separated	0	0.00	0	0.00	
Widowhood	0	0.00	0	0.00	
Religion					χ^2=4.157 d.f=3 p = 0.245 N.S
Hindu	28	93.33	23	76.67	
Christian	0	0.00	2	6.67	
Muslim	2	6.67	4	13.33	
Others	0	0.00	1	3.33	
Education					χ^2=6.202 d.f=5 p = 0.287 N.S
Illiterate	3	10.00	0	0.00	
Primary school	0	0.00	1	3.33	
Middle school	9	30.00	5	16.67	
High school	7	23.33	10	33.33	
Intermediate	7	23.33	10	33.33	
Graduate and above	4	13.33	4	13.33	
Profession	0	0.00	0	0.00	
Occupation					χ^2=10.872 d.f=6 p = 0.092 N.S
Unemployed	3	10.00	2	6.67	
Unskilled worker	1	3.33	0	0.00	
Semi skilled worker	0	0.00	4	13.33	
Skilled worker	10	33.33	7	23.33	
Clerical, shop owner, farmer	13	43.33	15	50.00	
Semi-profession	0	0.00	2	6.67	
Profession	3	10.00	0	0.00	

Demographic Variables	Experimental Group		Control Group		Chi-Square Value
	No.	%	No.	%	
Monthly income					χ^2=1.687 d.f=2 p = 0.430 N.S
<1589	0	0.00	0	0.00	
1590 – 4726	0	0.00	0	0.00	
4727 – 7877	0	0.00	0	0.00	
7878 - 11,816	13	43.33	17	56.67	
11,817 - 15,733	14	46.67	12	40.00	
15,754 - 31,506	3	10.00	1	3.33	
>31,507	0	0.00	0	0.00	
Type of food					χ^2=1.071 d.f=1 p = 0.301 N.S
Vegetarian	3	10.00	1	3.33	
Non-vegetarian	27	90.00	29	96.67	
Ova-vegetarian	0	0.00	0	0.00	
Lacto – vegetarian	0	0.00	0	0.00	
Type of family					χ^2=3.455 d.f=1 p = 0.063 N.S
Nuclear	22	73.33	15	50.00	
Joint	8	26.67	15	50.00	
Extended	0	0.00	0	0.00	
History of chronic disease					χ^2=2.406 d.f=3 p = 0.492 N.S
Diabetes mellitus	6	20.00	9	30.00	
Hypertension	5	16.67	5	16.67	
DM & HT	18	60.00	13	43.33	
Others	0	0.00	0	0.00	
None	1	3.33	3	10.00	

N.S – Not Significant

The table1 depicts the frequency and percentage distribution of demographic variables of CABG patients in the experimental and control group.

The findings revealed that in the experimental group, with regards to age 16(53.33%) were in the age group of 51 – 60 yrs, with respect to gender 26(86.67%) of the samples were male, almost all 30(100%) were married, with regards to religion 28(93.33%) were Hindus, considering the level of education, 9(30%) had middle school education, with regards to occcupation 13(43.33%) were clerical, shop owner, farmer, regarding the monthly income 14(46.67%) had monthly income of Rs.11,817 – 15,733, considering the type of food, 27(90%) were non-vegetarian, regarding their type of family, 22(73.33%) belonged to nuclear family and with regards to the chronic disease, 18(60%) had a history of DM & HTN.

Whereas in the control group, with regards to age, 17(56.67%) were in the age group of above 60 yrs, with respect to the gender, 28(93.33%) were male, almost all 30(100%) were married, with regards to religion 23(76.67%) were Hindus, considering the level of education 10(33.33%) had high and intermediate school education, with regards to occcupation 15(50%) were clerical, shop owner, farmer, regarding the monthly income 17(56.67%) had monthly income of Rs.7,878 – 11,816, considering the type of food, 29(96.67%) were non-vegetarian, regarding their type of family, 15(50%) belonged to nuclear and joint family respectively and with regards to the chronic disease 13(43.33%) had a history of DM & HTN.

The findings revealed that there was no significant difference between experimental and control group. The chi square test also revealed that there were no statistically significant difference between the experimental and control group in relation to the demographic variables which established the homogeneity of the sample.

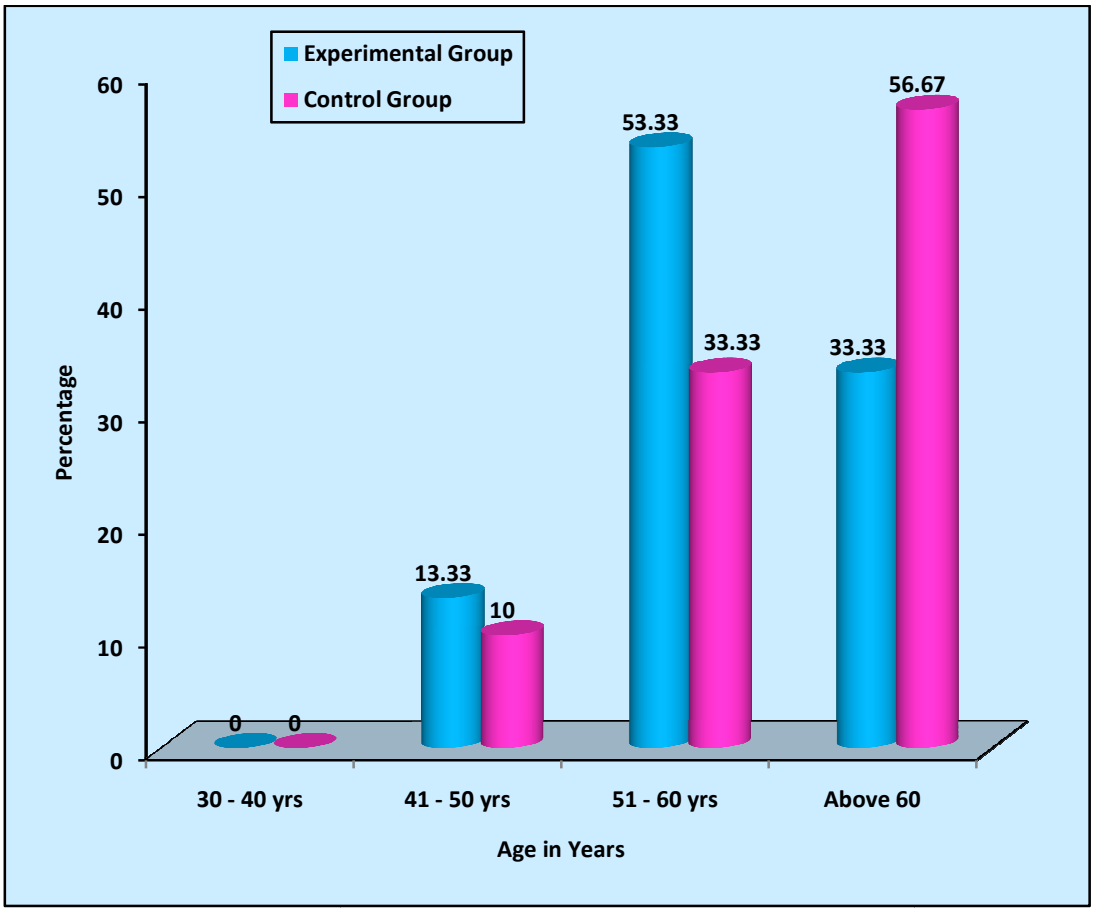


Fig.4.1: Percentage distribution of age of the CABG patients in the experimental and control group

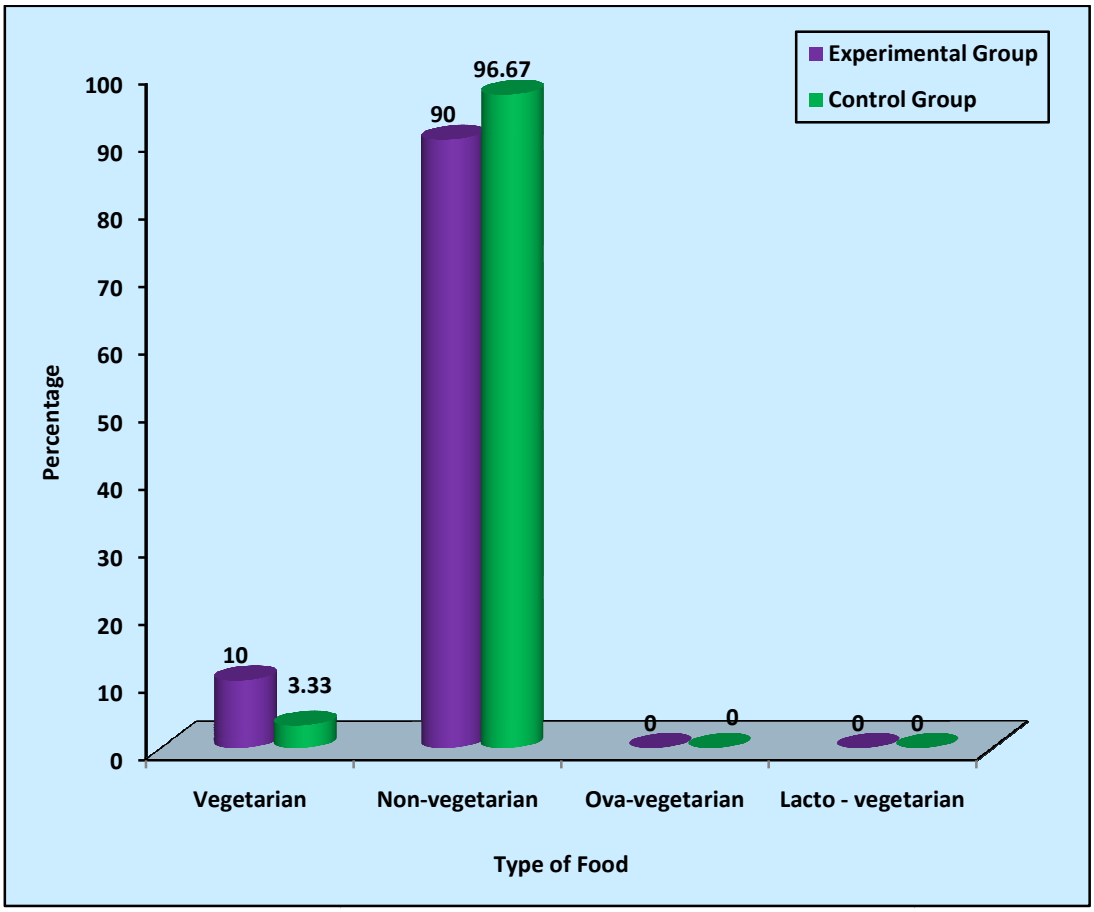


Fig.4.2: Percentage distribution of type of food of the CABG patients in the experimental and control group

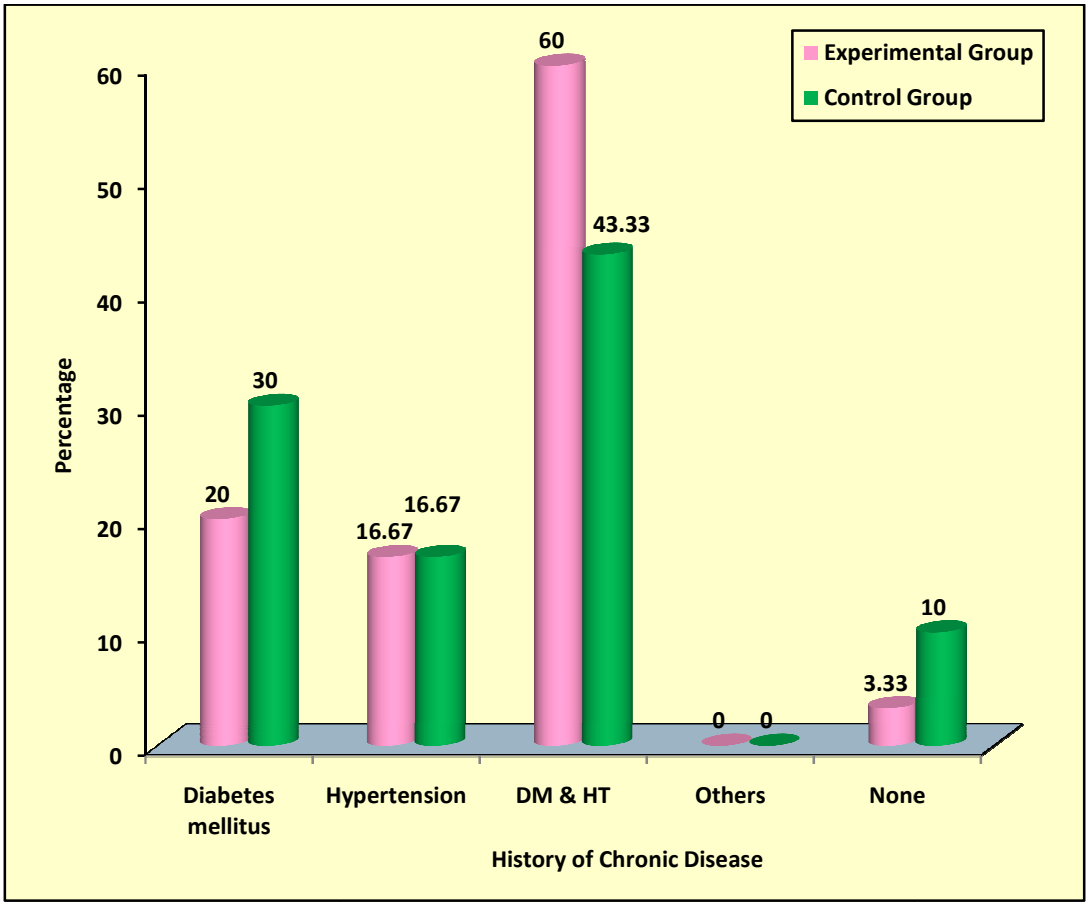


Fig.4.3: Percentage distribution of history of chronic disease of the CABG patients in the experimental and control group

SECTION B: ASSESSMENT OF LEVEL OF POST TEST KNOWLEDGE AND POST DISCHARGE PROBLEMS OF CABG PATIENTS IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 2: Frequency and percentage distribution of level of post test knoweldge components of CABG patients in experimental group. N=30

Post Test Knowledge	Inadequate (≤25%)		Fairly adequate (26 – 50%)		Moderately adequate (51 – 75%)		Adequate (≥76%)	
	No.	%	No.	%	No.	%	No.	%
General	1	3.33	4	13.33	8	26.67	17	56.67
Incisonal care	2	6.67	1	3.33	6	20.0	21	70.0
Dressing	10	33.33	0	0	0	0	20	66.67
Diet	0	0	6	20.0	0	0	24	80.0
Exercise	1	3.33	10	33.33	0	0	19	63.33
Activities	0	0	3	10.0	9	30.0	18	60.0
Driving	1	3.33	0	0	0	0	29	96.67
Traveling	2	6.67	7	23.33	0	0	21	70.0
Life style modification	0	0	0	0	0	0	30	100.0
Stress management	0	0	9	30.0	0	0	21	70.0
Resuming sexual activities	8	26.67	0	0	0	0	22	73.33
Follow-up	2	6.67	0	0	0	0	28	93.33

The table 2 shows frequency and percentage distribution of level of post test knoweldge components of CABG patients in experimental group.

Regarding the knowledge on general aspects, 17(56.67%), incisional care 21(70%), dressing 20(66.67%), diet 24(80%), exercise 19(63.33%), activities 18(60%), driving 29(96.67%), travelling 21(70), life style modifications 30(100%), system management 21(70%), resuming sexual activities 22(73.33%) and follow up 28(93.33%) had adequate knowledge and the remaining had moderate level of knowledge.

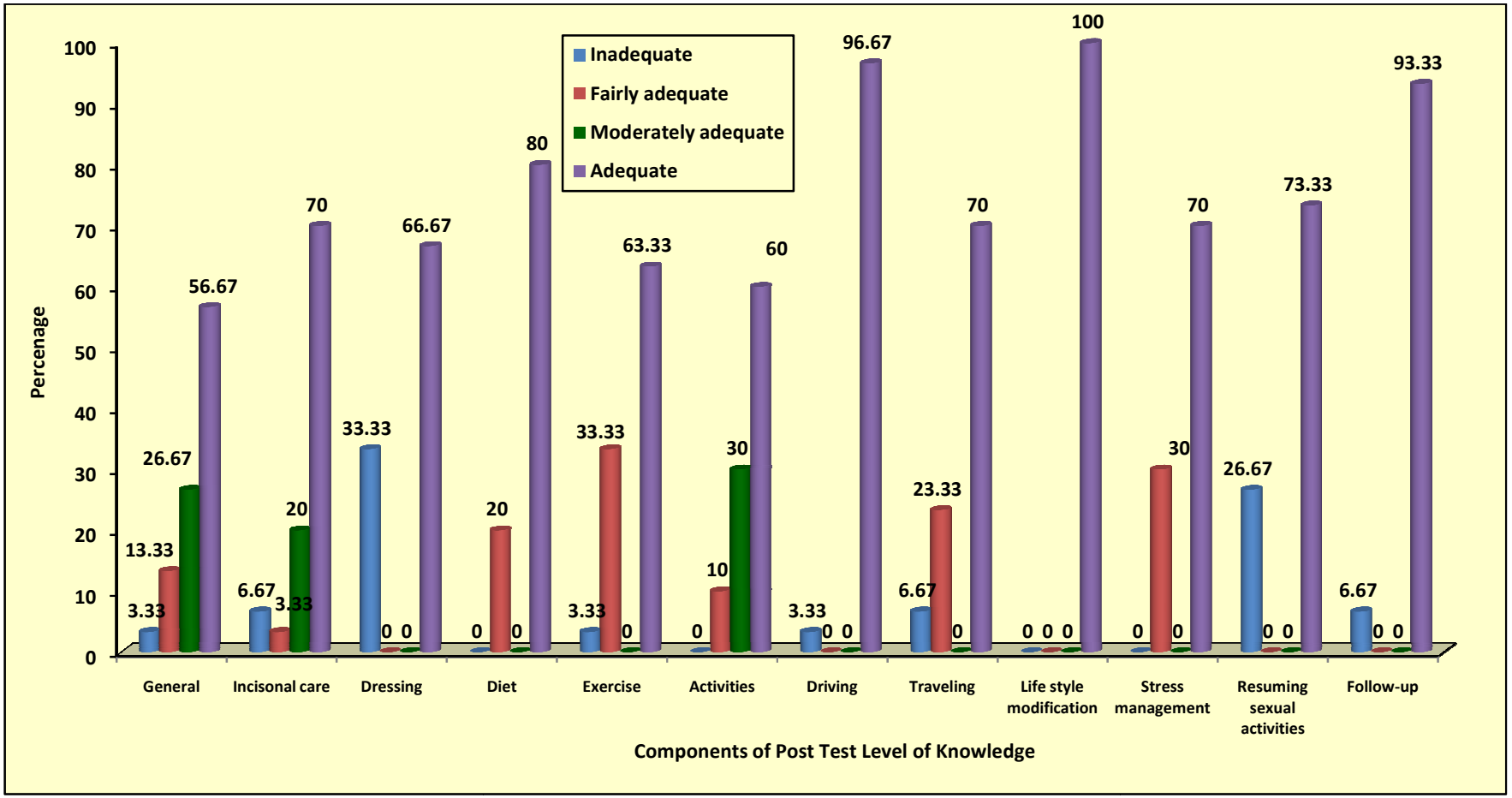


Fig.4.4: Percentage distribution of level of components of post test knoweldge of CABG patients in experimental group

Table 3: Frequency and percentage distribution of level of post test knowledge components of CABG patients in control group.

N = 30

Post Test Knowledge	Inadequate (≤25%)		Fairly adequate (26 – 50%)		Moderately adequate (51 – 75%)		Adequate (≥76 %)	
	No.	%	No.	%	No.	%	No.	%
General	1	3.33	17	56.67	9	30.0	3	10.0
Incisonal care	29	96.67	1	3.33	0	0	0	0
Dressing	23	76.67	0	0	0	0	7	23.33
Diet	2	6.67	16	53.33	0	0	12	40.0
Exercise	17	56.67	13	43.33	0	0	0	0
Activities	8	26.67	20	66.67	1	3.33	1	3.33
Driving	6	20.0	0	0	0	0	24	80.0
Traveling	21	70.0	9	30.0	0	0	0	0
Life style modification	3	10.0	0	0	0	0	27	90.0
Stress management	17	56.67	10	33.33	0	0	3	10.0
Resuming sexual activities	27	90.0	0	0	0	0	3	10.0
Follow-up	22	73.33	0	0	0	0	8	26.67

The table 3 shows frequency and percentage distribution of level of post test knoweldge components of CABG patients in control group.

Regarding the post test knowledge on general aspects 17(56.67%),diet 16(53.33%), activities 20(66.67%) had fairly adequate knowledge. Regarding incisional care 29(96.67%), dressing 23(76.67%), exercise 17(56.67%), travelling 21(70%), stress management 17(56.67%), resuming sexual activities 27(90%) and follow – up 22(73.33%) had inadequate knowledge. Considering driving 24(80%) and life style modification 27(90%) had adequate level of knowledge.

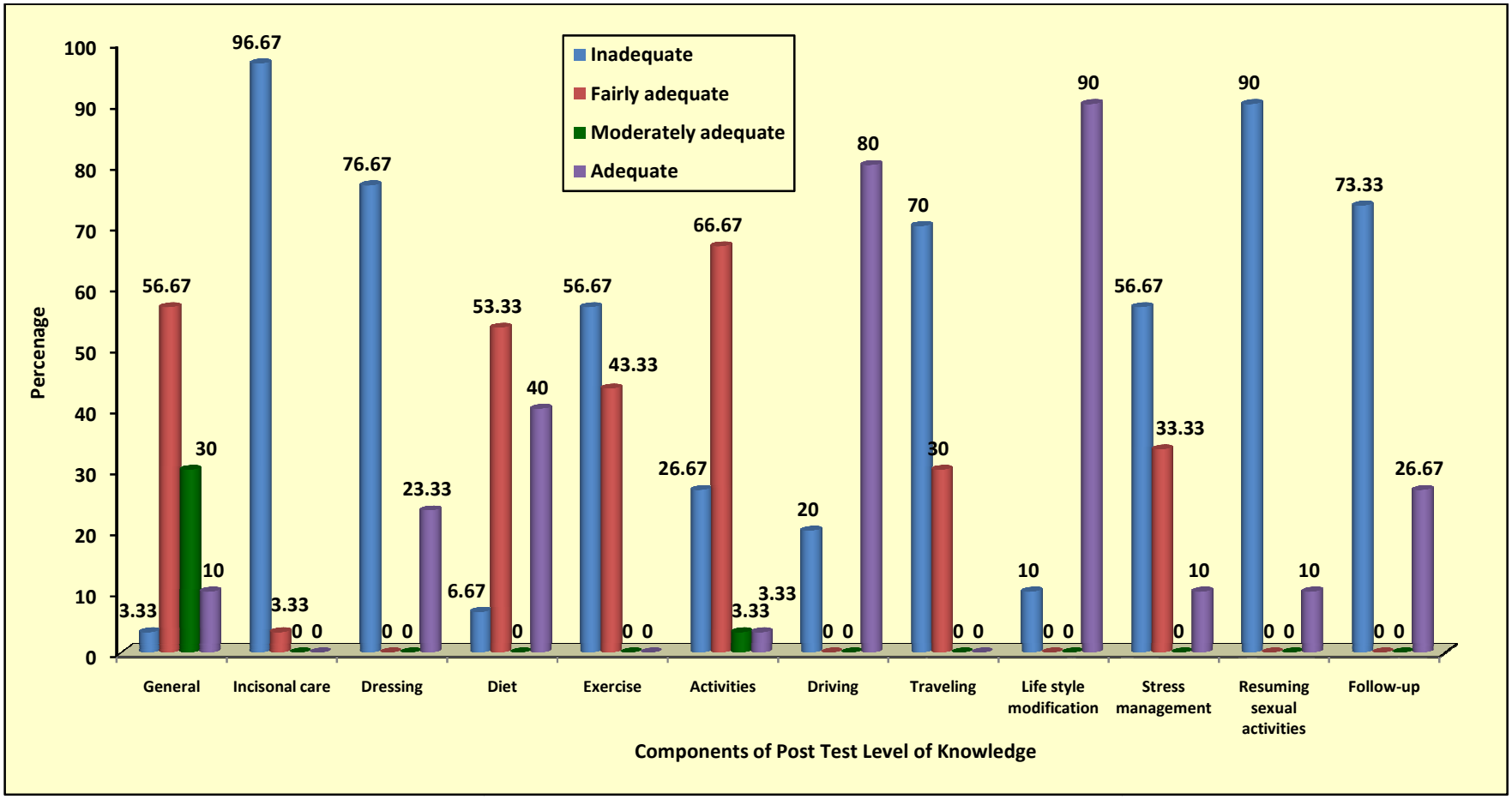


Fig.4.5: Percentage distribution of level of components of post test knoweldge of CABG patients in control group

Table 4: Frequency and percentage distribution of level of post test knoweldge of CABG patients in experimental and control group.

N = 60(30+30)

Post Test Knowledge	Inadequate (≤25%)		Fairly adequate (26 – 50%)		Moderately adquate (51 – 75%)		Adequate (≥76%)	
	No.	%	No.	%	No.	%	No.	%
Experimental Group	0	0	0	0	9	30.0	21	70.0
Control Group	8	26.67	15	50.0	7	23.33	0	0

The table 4 depicts the frequency and percentage distribution of level of post test knoweldge of CABG patients in experimental and control group.

With regards to the post test level of knowledge ,the findings revealed that in the experimental group 21(70%) had adequate knowledge, 9(30%) had moderately adequate knowledge and none of them had inadequate knowledge.

Whereas in the control group, the findings revealed that 7(23.33%) had moderately adequate knowledge, 15(50%) had fairly adequate knowledge, 8(26.67%) had inadequate knowledge and none of them had adequate level of knowledge on home care management of CABG patients.

The findings revealed that the level of post test knoweldge of CABG patients in experimental group were found to be adequate when compared to the level of post test knoweldge of CABG patients in control group.

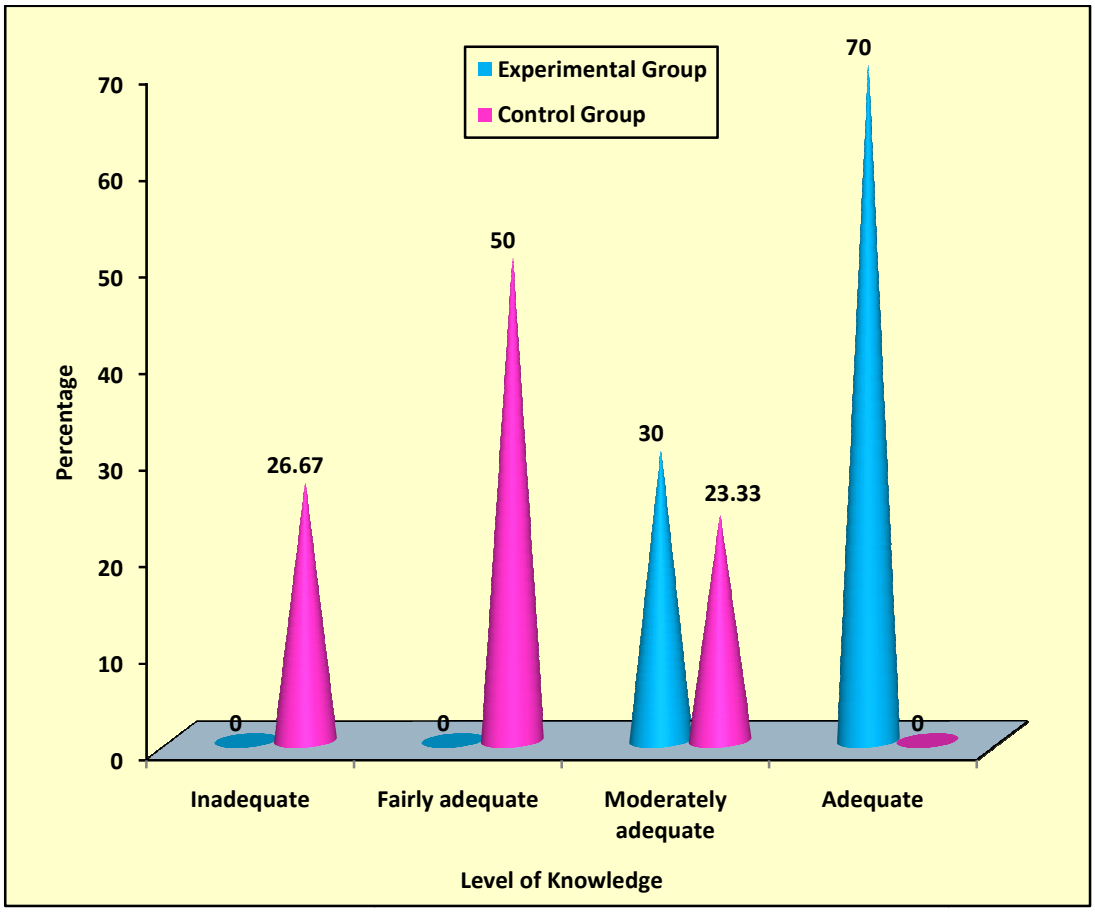


Fig.4.6: Percentage distribution of level of post test knoweldge of CABG patients in experimental and control group

Table 5: Mean and standard deviation of post test knowledge components of CABG patients in experimental and control group. N = 60(30+30)

Post Test Knowledge	Experimental Group		Control Group	
	Mean	S.D	Mean	S.D
General	3.37	0.85	2.47	0.73
Incisonal care	4.00	1.20	0.40	0.56
Dressing	0.67	0.48	0.23	0.43
Diet	1.80	0.41	1.33	0.61
Exercise	1.60	0.56	0.43	0.50
Activities	2.50	0.68	0.83	0.65
Driving	0.97	0.18	0.80	0.41
Traveling	1.63	0.61	0.30	0.47
Life style modification	1.00	0.00	0.90	0.31
Stress management	1.70	0.47	0.53	0.68
Resuming sexual activities	0.73	0.45	0.10	0.31
Follow-up	0.93	0.25	0.27	0.45

The table 5 depicts the mean and standard deviation of post test knowledge components of CABG patients in experimental and control group**.**

The findings revealed that in the experimental group, the mean score of general aspect was 3.37±0.85, incisional care (4.0±1.20), dressing (0.67±0.48), diet (1.80±0.41), exercise (1.60±0.56), activities (2.50±0.68), driving (0.97±0.18), traveling (1.63±0.61), life style modification (1.00±0.00), stress management (1.70±0.47), resuming sexual activities (0.73±0.45) and follow – up (0.93±0.25).

Whereas in the control group, the mean score of general component was (2.47±0.73), incisional care (0.40±0.56), dressing (0.23±0.43), diet (1.33±0.61), exercise (0.43±0.50), activities (0.83±0.65), driving (0.80±0.41), traveling (0.30±0.47), life style modification (0.90±0.31), stress management (0.53±0.68), resuming sexual activities (0.10±0.31) and follow – up (0.27±0.45).

The findings revealed that the post test knowledge mean score was found to be increased in the experimental group than the control group which indicated the effectiveness of information guide regarding home care management of CABG patients.

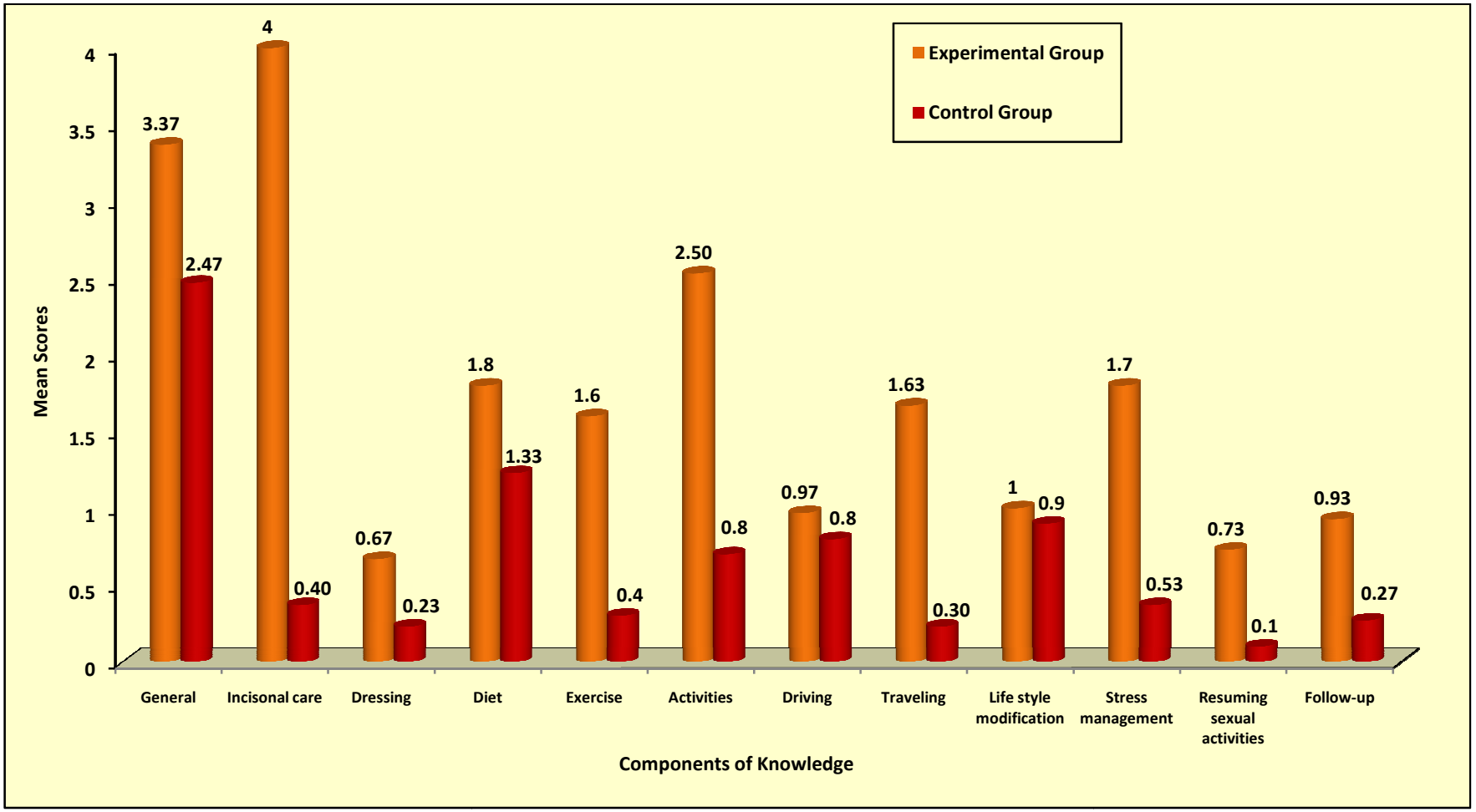


Fig.4.7: Mean of components of post test knoweldge score of CABG patients in experimental and control group

Table 6: Overall mean of post test knoweldge score of CABG patients in experimental and control group.

N = 60(30+30)

Post Test Knowledge	Mean	S.D
Experimental Group	20.73	2.32
Control Group	8.67	3.13

The table 6 depicts the overall mean of post test knoweldge score of CABG patients in experimental and control group**.**

The findings revealed that in the experimental group, the post test mean score of knowledge was 20.73 with the standard deviation of 2.32 and the post test mean score of knowledge was 8.6 with the standard deviation of 3.13 in the control group.

The findings indicated that the overall post test mean knowledge score of the experimental group was higher than the control group which inturn revealed the effectiveness of information guide.

Table 7: Frequency and percentage distribution of post discharge problems experienced by CABG patients in experimental group and control group.

N = 60(30+30)

Post Discharge Problems	Experimental Group		Control Group	
	No.	%	No.	%
Respiratory problems	26	86.67	27	90.0
Cardio vascular problems	22	73.33	24	80.0
Gastro intestinal problems	30	100.0	30	100.0
Incisional site problems	12	40.0	20	66.67
Pain	30	100.0	30	100.0
Neurological problems	12	40.0	20	66.67
Psychological problems	30	100.0	30	100.0
Social problems	14	46.67	22	73.33
Sleep problems	16	53.33	21	70.0
Other problems	18	60.0	24	80.0

The table 7 depicts the frequency and percentage distribution of post discharge problems experienced among CABG patients in experimental group and control group.

The findings revealed that in the experimental group, with regards to the post discharge problems 26(86.67%) had respiratory system problem, 22(73.33%) had cardio vascular system problem, almost all 30(100%) had gastro intestinal sytem problem, 12(40%) had incisiional site problem, all 30(100%) had complaints of pain, 12(40%) had neurological problem, all 30(100%) had psychological problem, 14(46.67%) had social problem, 16(53.33%) had sleep disturbances and 18(60%) had other post discharge problems.

Whereas in the control group, with regards to the post discharge problems 27(86.67%) had respiratory system problem, 24(80%) had cardio vascular system problem, almost all 30(100%) had gastro intestinal sytem problem, 20(66.67%) had incisiional site problem, 30(100%) had complaints of pain, 20(66.67%) had neurological problem, 30(100%) had psychological problem, 22(73.33%) had social problem, 21(70%) had sleep disturbances and 24(80%) had other post – discharge problems.

The findings revealed that almost all 60(100%) samples had the major post discharge problems as gastro intestinal system problem, complaints of pain and psychological problem whereas respiratory and cardio vascular problems were found to be common among CABG patients in the post operative period. The other post discharge problems were found to have less among the experimental group.

Table 8: Frequency and percentage distribution of level of post discharge problems of CABG patients in experimental and control group.

N = 60(30+30)

Post Discharge Problems	Low (<50%)		Moderate (50 – 75%)		High (>75)	
	No.	%	No.	%	No.	%
Experimental Group	24	80.0	6	20.0	0	0
Control Group	0	0	18	60.0	12	40.0

The table 8 depicts the frequency and percentage distribution of level of post discharge problems of CABG patients in experimental and control group.

With regards to the level of post discharge problems of CABG patients, in the experimental group the findings revealed that 24(80%) had low level of post discharge problems and 6(20%) had moderate level of post-discharge problems and none of them had high level of post dicharge problems.

Whereas in the control group the findings revealed that 12(40%) had high level of post discharge problems, 18(60%) had moderate level of post discharge problems and none of them had low level of post discharge problems.

The findings indicated that the post discharge problems were less among experimental group and it was high for the control group which showed the effectiveness of information guide regarding home care management of CABG patients.

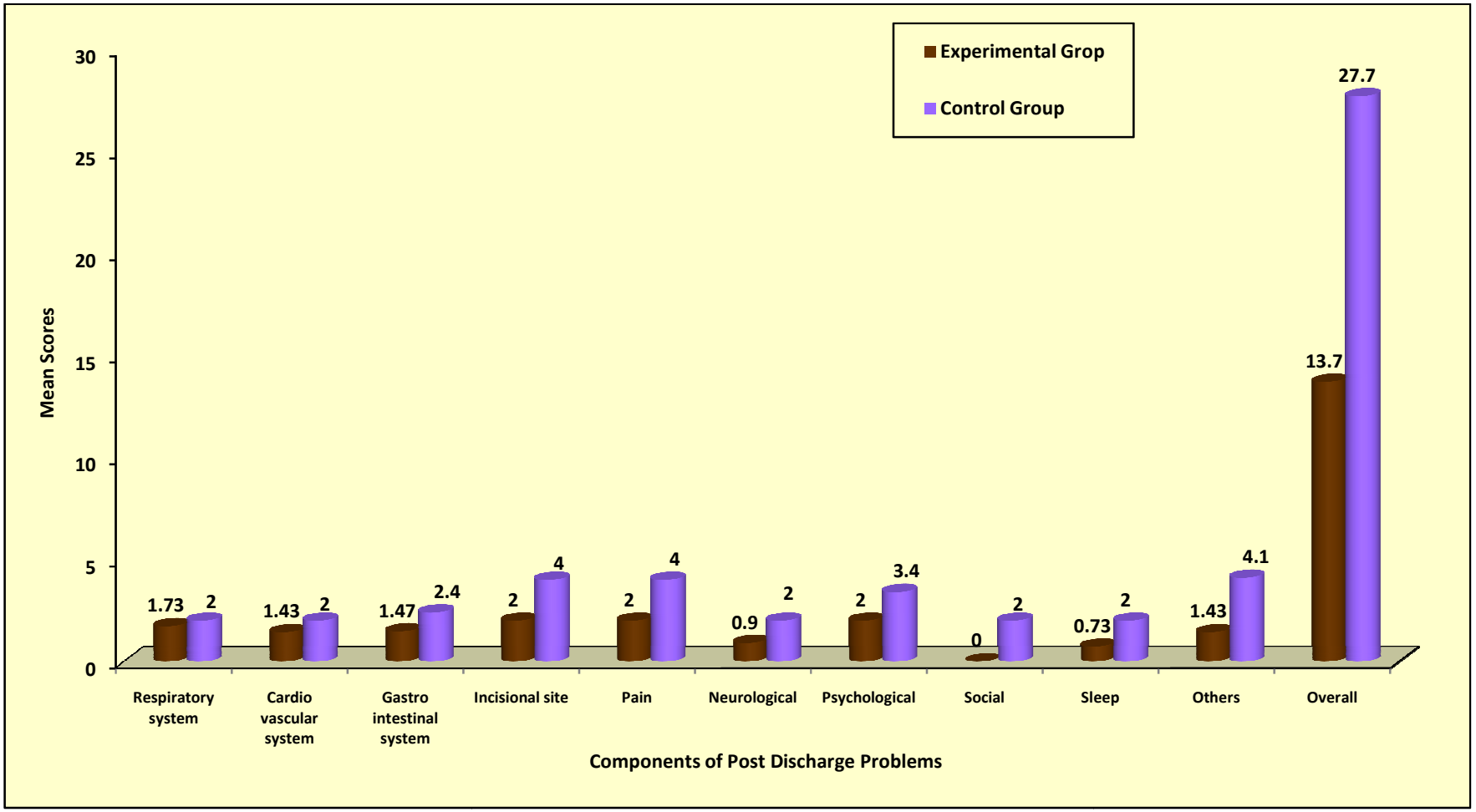


Fig.4.9: Mean of components of post discharge problems score of CABG patients in experimental and control group

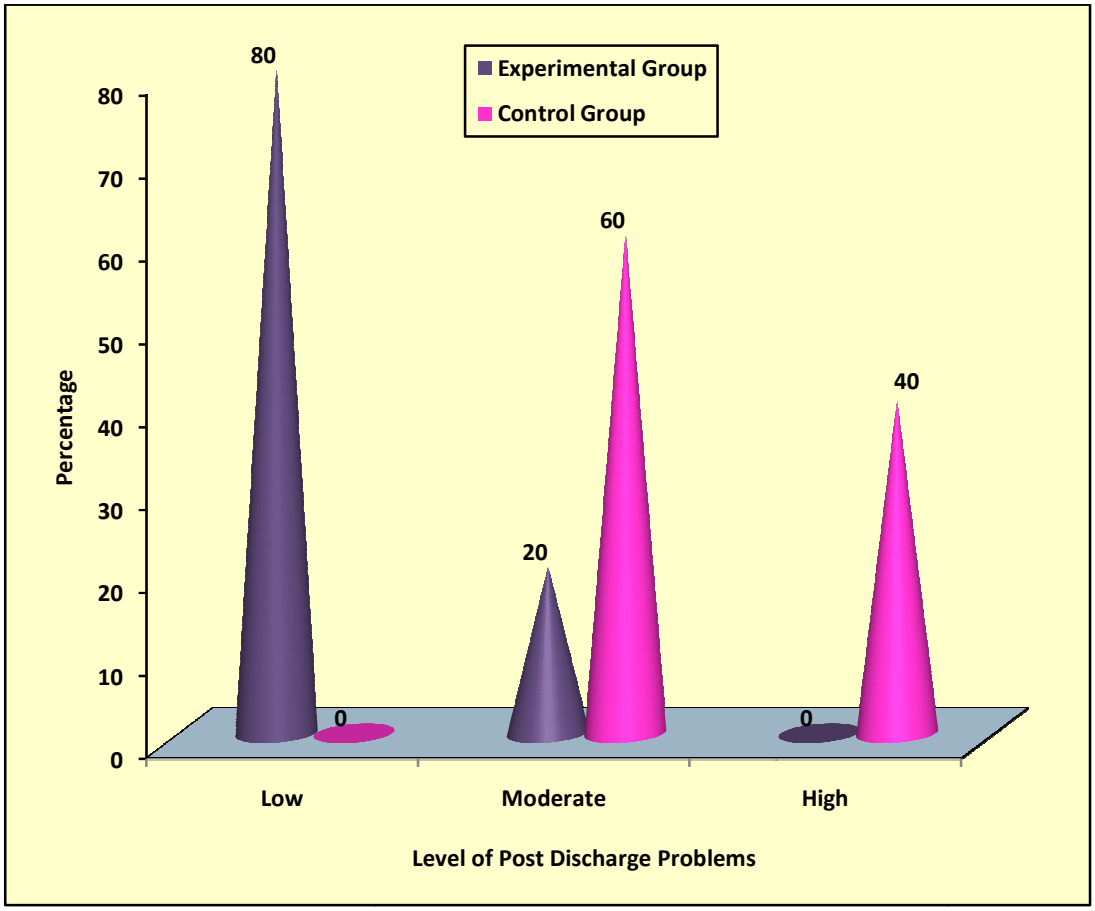


Fig.4.8: Percentage distribution of level of post discharge problems of CABG patients in experimental and control group

Table 9: Mean components of post discharge problems score of CABG patients in experimental and control group.

N = 60(30+30)

Post Discharge Problems	Experimental Group		Control Group	
	Mean	**S.D**	**Mean**	**S.D**
Respiratory system	1.73	0.45	2.00	0.00
Cardio vascular system	1.43	0.50	2.00	0.00
Gastro intestinal system	1.47	0.51	2.40	0.50
Incisional site	2.00	0.64	4.00	0.00
Pain	2.00	0.64	4.00	0.00
Neurological	0.90	0.31	2.00	0.00
Psychological	2.00	0.64	3.40	0.93
Social	0.00	0.00	2.00	0.00
Sleep	0.73	0.78	2.00	0.00
Others	1.43	0.57	4.10	0.84
Overall	**13.70**	**4.03**	**27.70**	**2.98**

The table 9 shows that mean score of component respiratory system in experimental group was 1.73±0.45, cardio vascular system (1.43±0.50), gastro intestinal system (1.47±0.51), incisional site (2.0 ±0.64), pain (2.0±0.64), neurological (0.90±0.31), psychological (2.0±0.64), sleep (0.73±0.78) and others (1.43±0.57). The overall mean score of post discharge problem in the experimental group was 13.70±4.03.

With regards to the control group the findings revealed that the mean score of component respiratory system in experimental group was 2.0±0.00, cardio vascular system (2.0±0.00), gastro intestinal system (2.40±0.50), incisional site (4.0±0.00), pain (4.0±0.00), neurological (2.0±0.00), psychological (3.40±0.93), social (2.0 ±0.00), sleep (2.0±0.00) and others (4.10±0.84). The overall mean score of post discharge problem in the control group was 27.70±2.98.

The findings revealed that the overall mean score was found to be high in the control group than the experimental group which showed the decrease in the post discharge problems in the experimental group when compared with the control group.

SECTION C: ASSESSMENT OF RELATIONSHIP BETWEEN POST TEST KNOWLEDGE AND POST DISCHARGE PROBLEMS OF CABG PATIENTS IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 10: Correlation between post test knowledge on home care management and post discharge problems of CABG patients in the experimental and control group.

N = 60(30+30)

Group	Knowledge		Post Discharge Problem		'r' Value
	Mean	S.D	Mean	S.D	
Experimental Group	20.73	2.32	13.70	4.03	**r = -0.670 p = 0.000 S****
Control Group	8.67	3.13	27.70	2.98	r = 0.100 p = 0.601 N.S

**p<0.01, S – Significant, N.S – Not Significant

The table 10 depicts correlation between post test knowledge on home care management and post discharge problems of CABG patients in the experimental and control group.

The findings of the experimental group revealed that mean knowledge score of the experimental group was 20.73 ± 2.32 and the mean post discharge problems score was 13.70±4.03.

The calculated Karl Pearson's correlation coefficient 'r' value was **r= -0.670** which indicated the negative correlation which inturn revealed that there was a statistically significant relationship between the knowledge on home care management and post discharge problems.

The findings also indicated that, when the level of knowledge increases, post discharge problem decreases, but the findings of control group revealed that there was no statistically significant relationship between the knowledge and post discharge problems.

SECTION D: ASSESSMENT OF EFFECTIVENESS OF INFORMATION GUIDE ON KNOWLEDGE ON HOME CARE MANAGEMENT AND POST DISCHARGE PROBLEMS OF CABG PATIENTS IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 11: Comparison of post test knowledge and post discharge problems regarding home care management of CABG patients between the experimental and control group.

N = 60(30+30)

Group	Experimental Group		Control Group		Unpaired 't' Value
	Mean	S.D	Mean	S.D	
Knowledge	20.73	2.32	8.67	3.13	**t = 16.957 p = 0.000 S*** **
Post Discharge Problem	13.70	4.03	27.70	2.98	**t = 15.298 p = 0.000 S*** **

***p<0.001, S – Significant

The table 11 depicts the comparison of post test knowledge and post discharge problems regarding home care management of CABG patients between the experimental and control group.

The findings revealed that the post test mean knowledge score of experimental group was 20.73±2.32 and the post test mean knowledge score of control group was 8.67±3.13. The calculated unpaired 't' value was **(t = 16.957 at p=0.000)** which indicated statistically significant difference between the experimental and control group .

The analysis also revealed that the mean post discharge problems score of experimental group was 13.70±4.03 and the mean post discharge problems score of the control group was 27.70±2.98. The calculated unpaired 't' value was **(t = 15.298 at p=0.000)** which indicated statistically significant difference between the experimental and control group .

The study findings revealed that the information guide was effective in increasing the level of knowledge regarding home care management and reducing the post discharge problems among CABG patients.

SECTION E: ASSESSMENT OF ASSOCIATION OF POST TEST KNOWLEDGE ON HOME CARE MANAGEMENT AND POST DISCHARGE PROBLEMS OF CABG PATIENTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES OF EXPERIMENTAL AND CONTROL GROUP.

Table 12: Association of post test level of knowledge of CABG patients with their selected demographic variables in the experimental group.

N = 60

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Age					χ^2=1.848 d.f=2 p = 0.397 N.S
30 - 40 yrs	-	-	-	-	
41 - 50 yrs	2	6.7	2	6.7	
51 - 60 yrs	9	30.0	7	23.3	
Above 60	8	26.7	2	6.7	
Gender					χ^2=2.671 d.f=1 p = 0.102 N.S
Male	15	50.0	11	36.7	
Female	4	13.3	0	0	
Marital status					-
Married	19	63.3	11	36.7	
Single	-	-	-	-	
Separated	-	-	-	-	
Widowhood	-	-	-	-	
Religion					χ^2=1.241 d.f=1 p = 0.265 N.S
Hindu	17	56.7	11	36.7	
Christian	-	-	-	-	
Muslim	2	6.7	0	0	
Others	-	-	-	-	
Education					**χ^2=12.638 d.f=4 p = 0.013 S***
Illiterate	3	10.0	0	0	
Primary school	-	-	-	-	
Middle school	8	26.7	1	3.3	
High school	3	10.0	4	13.3	
Intermediate	5	16.7	2	6.7	
Graduate and above	0	0	4	13.3	
Profession	-	-	-	-	

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Occupation					
Unemployed	3	10.0	0	0	
Unskilled worker	1	3.3	0	0	χ^2=7.707
Semi skilled worker	-	-	-	-	d.f=4
Skilled worker	7	23.3	3	10.0	p = 0.103
Clerical, shop owner, farmer	8	26.7	5	16.7	N.S
Semi-profession	-	-	-	-	
Profession	0	0	2	6.7	
Monthly income					
<1589	-	-	-	-	
1590 – 4726	-	-	-	-	χ^2=5.772
4727 – 7877	-	-	-	-	d.f=2
7878 - 11,816	9	30.0	4	13.3	p = 0.056
11,817 - 15,733	10	33.3	4	13.3	N.S
15,754 - 31,506	0	0	3	10.0	
>31,507	-	-	-	-	
Type of food					χ^2=1.930
Vegetarian	3	10.0	0	0	d.f=1
Non-vegetarian	16	53.3	11	36.7	p = 0.165
Ova-vegetarian	-	-	-	-	N.S
Lacto – vegetarian	-	-	-	-	
Type of family					χ^2=2.744
Nuclear	12	40.0	10	33.3	d.f=1
Joint	7	23.3	1	3.3	p = 0.098
Extended	-	-	-	-	N.S
History of chronic disease					
Diabetes mellitus	2	6.7	4	13.3	**χ^2=8.825**
Hypertension	2	6.7	3	10.0	**d.f=3**
DM & HT	15	50.0	3	10.0	**p = 0.040**
Others	-	-	-	-	**S***
None	0	0	1	3.3	

*p<0.05, S – Significant, N.S – Not Significant

The table 12 depicts the association of post test level of knowledge of CABG patients with their selected demographic variables in the experimental group.

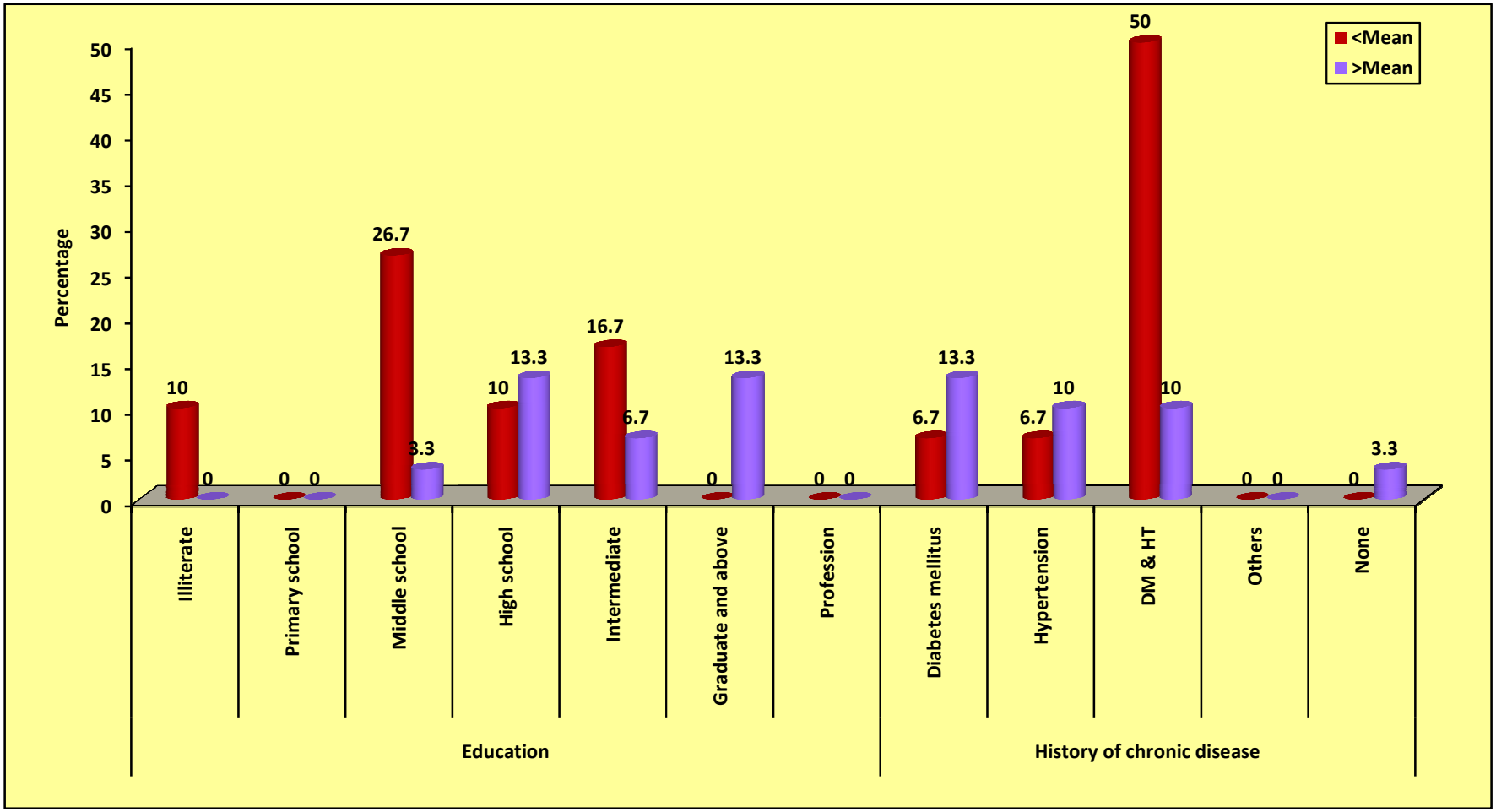


Fig.4.10: Association of post test level of knowledge of CABG patients with their selected demographic variables such as education and history of chronic illness in the experimental group

The findings revealed that there was statisfically significant association was found between the level of knowledge and the demographic variable in relation to education **(χ^2=12.638 at p<0.05)** and history of chronic disease **(χ^2=8.825 at p<0.05),** and the other demographic variables have not shown statistically significant association with post test level of knowledge among CABG patients in the experimental group.

The findings revealed that CABG patients with middle school education 8(26.7%) had below average level of knowledge and patients with high school and graduate 4(13.3%) had above average level of knowledge. Also,the findings revealed that CABG patients with DM & HT 15(50%), as a history of chronic disease had below average level of knowledge in the experimental group.

Table 13: Association of post test level of post discharge problems of CABG patients with their selected demographic variables in the experimental group.

N = 60

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Age					χ^2=2.359 d.f=2 p = 0.307 N.S
30 - 40 yrs	-	-	-	-	
41 - 50 yrs	3	10.0	1	3.3	
51 - 60 yrs	7	23.3	9	30.0	
Above 60	7	23.3	3	10.0	
Gender					**χ^2=6.036 d.f=1 p = 0.014 S***
Male	17	56.7	9	30.0	
Female	0	0	4	13.3	
Marital status					-
Married	17	56.7	13	43.3	
Single	-	-	-	-	
Separated	-	-	-	-	
Widowhood	-	-	-	-	
Religion					χ^2=0.039 d.f=1 p = 0.844 N.S
Hindu	16	53.3	12	40.0	
Christian	-	-	-	-	
Muslim	1	3.3	1	3.3	
Others	-	-	-	-	
Education					χ^2=5.097 d.f=4 p = 0.277 N.S
Illiterate	0	0	3	10.0	
Primary school	-	-	-	-	
Middle school	5	16.7	4	13.3	
High school	5	16.7	2	6.7	
Intermediate	4	13.3	3	10.0	
Graduate and above	3	10.0	1	3.3	
Profession	-	-	-	-	
Occupation					χ^2=8.542 d.f=4 p = 0.074 N.S
Unemployed	0	0	3	10.0	
Unskilled worker	0	0	1	3.3	
Semi skilled worker	-	-	-	-	
Skilled worker	5	16.7	5	16.7	
Clerical, shop owner, farmer	9	30.0	4	13.3	
Semi-profession	-	-	-	-	
Profession	3	10.0	0	0	

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Monthly income					**χ^2=7.087 d.f=2 p = 0.029 S***
<1589	-	-	-	-	
1590 – 4726	-	-	-	-	
4727 – 7877	-	-	-	-	
7878 - 11,816	4	13.3	9	30.0	
11,817 - 15,733	10	33.3	4	13.3	
15,754 - 31,506	3	10.0	0	0	
>31,507	-	-	-	-	
Type of food					χ^2=2.549 d.f=1 p = 0.110 N.S
Vegetarian	3	10.0	0	0	
Non-vegetarian	14	46.7	13	43.3	
Ova-vegetarian	-	-	-	-	
Lacto – vegetarian	-	-	-	-	
Type of family					χ^2=1.632 d.f=1 p = 0.201 N.S
Nuclear	14	46.7	8	26.7	
Joint	3	10.0	5	16.7	
Extended	-	-	-	-	
History of chronic disease					χ^2=1.357 d.f=3 p = 0.716 N.S
Diabetes mellitus	4	13.3	2	6.7	
Hypertension	3	10.0	2	6.7	
DM & HT	9	30.0	9	30.0	
Others	-	-	-	-	
None	1	3.3	0	0	

*p<0.05, S – Significant, N.S – Not Significant

The table 13 depicts the association of post test level of post discharge problems of CABG patients with their selected demographic variables in the experimental group.

The findings revealed that there was statisfically significant association was found between the level of post-discharge problems and the demographic variable gender **(χ^2=6.036 at p<0.05)** and monthly income **(χ^2=7.087 at p<0.05)** and the other demographic variables have not shown statistically significant association with post discharge problems among CABG patients in the experimental group.

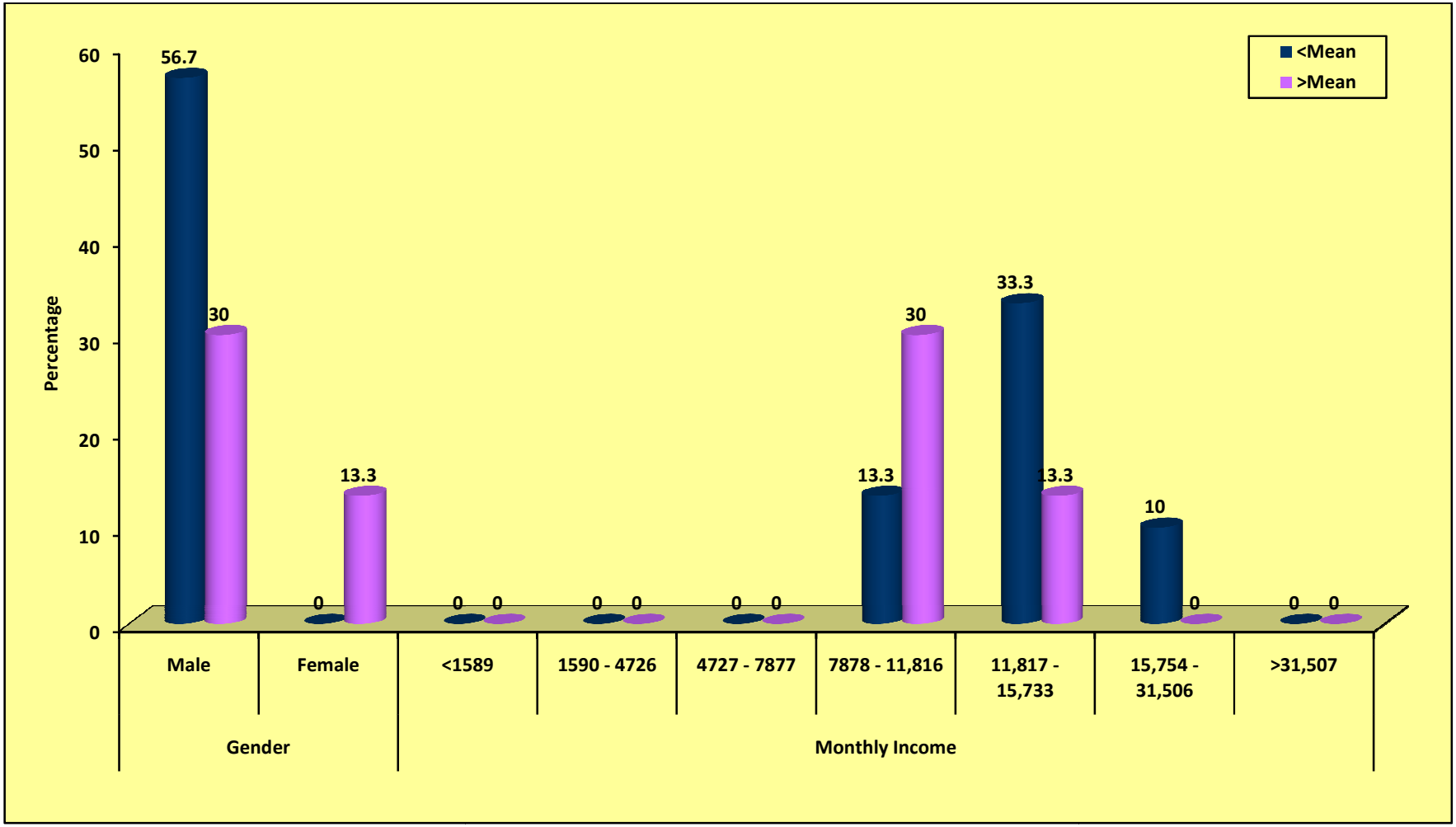


Fig.4.11: Association of post test level of post discharge problems of CABG patients with their selected demographic variables such as gender and monthly income in the experimental group

The findings revealed that CABG patients who were male 17(56.7%) had below average level of post discharge problems and female 9(30%) had above average level of post –discharge problems. Also, the findings revealed that CABG patients with a monthly income of Rs.11,817-15,733, 10(33.3%) had below average level of post discharge problems and patients with a monthly income of Rs.7878-11,816, 9(30%) had above average level of post discharge problems in the experimental group.

Table 14: Association of post test level of knowledge of CABG patients with their selected demographic variables in the control group.

N = 60

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Age					χ^2=0.260 d.f=2 p = 0.878 N.S
30 - 40 yrs	-	-	-	-	
41 - 50 yrs	1	3.3	2	6.7	
51 - 60 yrs	5	16.7	5	16.7	
Above 60	8	26.7	9	30.0	
Gender					χ^2=0.010 d.f=1 p = 0.922 N.S
Male	13	43.3	15	50.0	
Female	1	3.3	1	3.3	
Marital status					-
Married	14	46.7	16	53.3	
Single	-	-	-	-	
Separated	-	-	-	-	
Widowhood	-	-	-	-	
Religion					χ^2=4.277 d.f=3 p = 0.233 N.S
Hindu	13	43.3	10	33.3	
Christian	0	0	2	6.7	
Muslim	1	3.3	3	10.0	
Others	0	0	1	3.3	
Education					χ^2=3.683 d.f=4 p = 0.451 N.S
Illiterate	-	-	-	-	
Primary school	1	3.3	0	0	
Middle school	2	6.7	3	10.0	
High school	3	10.0	7	23.3	
Intermediate	5	16.7	5	16.7	
Graduate and above	3	10.0	1	3.3	
Profession	-	-	-	-	
Occupation					χ^2=1.617 d.f=4 p = 0.806 N.S
Unemployed	1	3.3	1	3.3	
Unskilled worker	-	-	-	-	
Semi skilled worker	3	10.0	1	3.3	
Skilled worker	3	10.0	4	13.3	
Clerical, shop owner, farmer	6	20.0	9	30.0	
Semi-profession	1	3.3	1	3.3	
Profession	-	-	-	-	

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Monthly income					χ^2=4.416 d.f=2 p = 0.110 N.S
<1589	-	-	-	-	
1590 – 4726	-	-	-	-	
4727 – 7877	-	-	-	-	
7878 - 11,816	10	33.3	7	23.3	
11,817 - 15,733	3	10.0	9	30.0	
15,754 - 31,506	1	3.3	0	0	
>31,507	-	-	-	-	
Type of food					χ^2=1.182 d.f=1 p = 0.277 N.S
Vegetarian	1	3.3	0	0	
Non-vegetarian	13	43.3	16	53.3	
Ova-vegetarian	-	-	-	-	
Lacto – vegetarian	-	-	-	-	
Type of family					χ^2=2.143 d.f=1 p = 0.143 N.S
Nuclear	9	30.0	6	20.0	
Joint	5	16.7	10	33.3	
Extended	-	-	-	-	
History of chronic disease					χ^2=0.591 d.f=3 p = 0.899 N.S
Diabetes mellitus	4	13.3	5	16.7	
Hypertension	2	6.7	3	10.0	
DM & HT	7	23.3	6	20.0	
Others	-	-	-	-	
None	1	3.3	2	6.7	

N.S – Not Significant

The table 14 depicts the association of post test level of knowledge of CABG patients with their selected demographic variables in the control group.

The findings revealed that none of the demographic variables had shown statistically significant association with post test level of knowledge among CABG patients in the control group.

Table 15: Association of post test level of post discharge problems of CABG patients with their selected demographic variables in the control group.

N = 60

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Age					χ^2=0.825 d.f=2 p = 0.662 N.S
30 - 40 yrs	-	-	-	-	
41 - 50 yrs	2	6.7	1	3.3	
51 - 60 yrs	7	23.3	3	10.0	
Above 60	9	30.0	8	26.7	
Gender					χ^2=1.429 d.f=1 p = 0.232 N.S
Male	16	53.3	12	40.0	
Female	2	6.7	0	0	
Marital status					-
Married	18	60.0	12	40.0	
Single	-	-	-	-	
Separated	-	-	-	-	
Widowhood	-	-	-	-	
Religion					χ^2=1.241 d.f=3 p = 0.743 N.S
Hindu	13	43.3	10	33.3	
Christian	1	3.3	1	3.3	
Muslim	3	10.0	1	3.3	
Others	1	3.3	0	0	
Education					χ^2=5.833 d.f=4 p = 0.212 N.S
Illiterate	-	-	-	-	
Primary school	1	3.3	0	0	
Middle school	5	16.7	0	0	
High school	4	13.3	6	20.0	
Intermediate	6	20.0	4	13.3	
Graduate and above	2	6.7	2	6.7	
Profession	-	-	-	-	
Occupation					χ^2=2.718 d.f=4 p = 0.606 N.S
Unemployed	2	6.7	0	0	
Unskilled worker	-	-	-	-	
Semi skilled worker	2	6.7	2	6.7	
Skilled worker	3	10.0	4	13.3	
Clerical, shop owner, farmer	10	33.3	5	16.7	
Semi-profession	1	3.3	1	3.3	
Profession	-	-	-	-	

Demographic Variables	<Mean		>Mean		Chi-Square Value
	No.	%	No.	%	
Monthly income					χ^2=0.690 d.f=2 p = 0.708 N.S
<1589	-	-	-	-	
1590 – 4726	-	-	-	-	
4727 – 7877	-	-	-	-	
7878 - 11,816	10	33.3	7	23.3	
11,817 - 15,733	7	23.3	5	16.7	
15,754 - 31,506	1	3.3	0	0	
>31,507	-	-	-	-	
Type of food					χ^2=0.690 d.f=1 p = 0.406 N.S
Vegetarian	1	3.3	0	0	
Non-vegetarian	17	56.7	12	40.0	
Ova-vegetarian	-	-	-	-	
Lacto – vegetarian	-	-	-	-	
Type of family					**χ^2=5.000 d.f=1 p = 0.025 S***
Nuclear	6	20.0	9	30.0	
Joint	12	40.0	3	10.0	
Extended	-	-	-	-	
History of chronic disease					χ^2=1.068 d.f=3 p = 0.785 N.S
Diabetes mellitus	6	20.0	3	10.0	
Hypertension	3	10.0	2	6.7	
DM & HT	8	26.7	5	16.7	
Others	-	-	-	-	
None	1	3.3	2	6.7	

*p<0.05, S – Significant, N.S – Not Significant

The table 15 depicts the association of post test level of post discharge problems of CABG patients with their selected demographic variables in the control group.

The findings revealed that there was statistically significant association was found between the level of post discharge problems and the demographic variable type of family **(χ^2=5.000 at p<0.05)** and the other demographic variables have not shown statistically significant association with post discharge problems among CABG patients in the control group.

The findings revealed that CABG patients who belonged to joint family 12(40%) had below average level of post discharge problems and patients who belonged to nuclear family had above average level of post discharge problems in the control group.

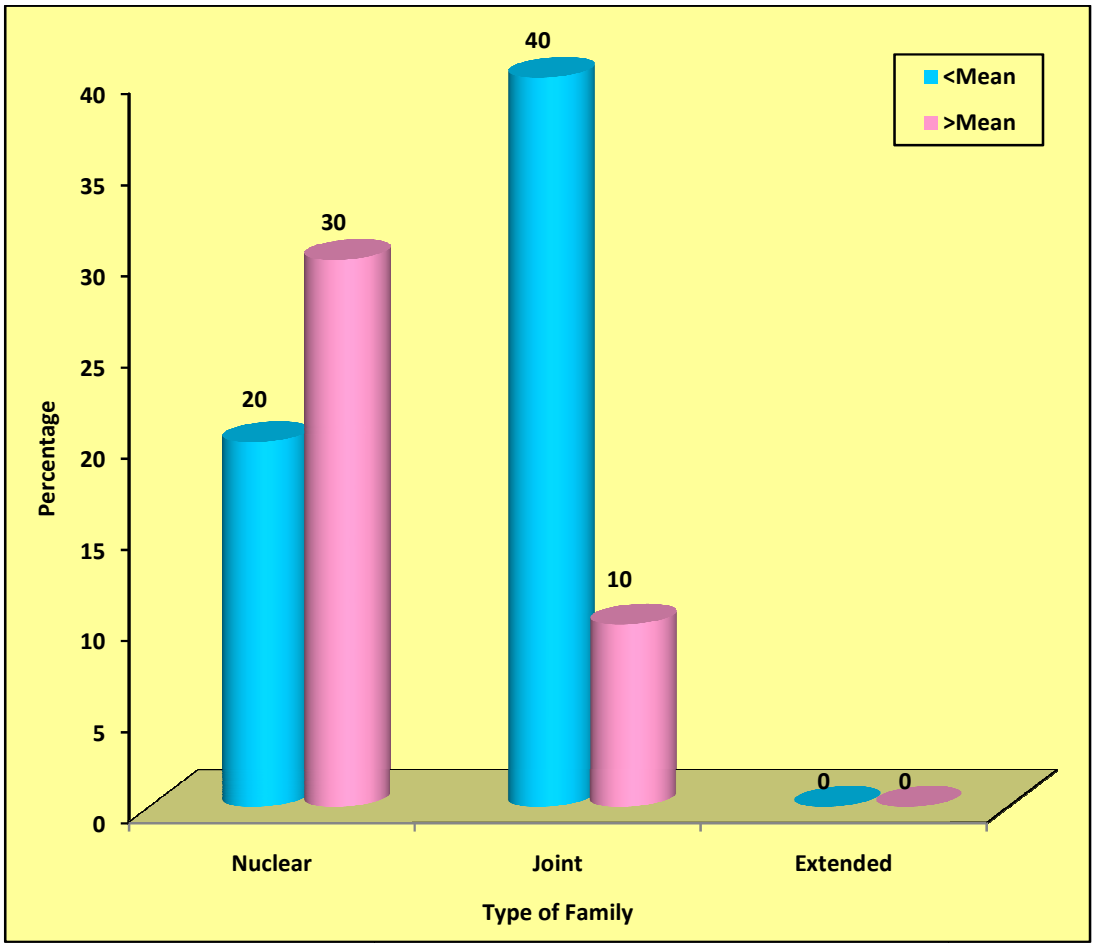


Fig.4.12: Association of post test level of post discharge problems of CABG patients with their selected demographic variables such as type of family in the control group

DISCUSSION

CHAPTER – 5

DISCUSSION

This chapter deals with the detailed discussion on the findings of the study interpreted by statistical analysis. The findings are discussed in relation to the objectives, need for the study, related literature and conceptual framework.

The present study was executed to assess the effectiveness of information guide regarding home care management among CABG patients. The findings are discussed objective wise and presented below:

Description of demographic variables

The selected demographic variables of the study were age, gender, marital status, religion, education, occupation, monthly income, type of food, type of family and history of chronic disease. A total of 60 samples participated in the study with 30 in the experimental group and 30 in the control group. With regards to age 16(53.33%) were in the age group of 51-60 years in the experimental group and 17(56.67%) were in the age group of above 60 years in the control group. With respect to the gender 26(86.67%) participants in the experimental group and 28(93.33%) in the control group were males.

Considering the marital status, almost all 60(100%) participants in the experimental group and control group were married. With regard to religion, 28(93.33%) participants in the experimental group and 23(76.67%) in the control group were Hindus. Considering the level of education, 4(13.33%) were graduate and above in both experimental and control group and 9(30%) had middle school education in the experimental group and 10(33.33%) had high and intermediate school education in the control group.

With regards to occupation, 13(43.33%) had the job category as clerical, shop owner, farmer in the experimental group and 15(50%) had the job category as clerical, shop owner, farmer in the control group. Regarding monthly income, 14(46.67%) had monthly income of Rs.11,817 – 15,733 in the experimental group and 17(56.67%) had

monthly income of Rs.7,878 – 11,816 in the control group. Considering the type of food, 27(90%) belongs to non-vegetarian in the experimental group and 29(96.67%) belongs to non-vegetarian in the control group.

Regarding the type of family, 22(73.33%) were nuclear family in the experimental group and 15(50%) were nuclear and joint family in the control group. With regards to the history of chronic disease, 18(60%) had Diabetes Mellitus & Hypertension as history of chronic disease in the experimental group and 13(43.33%) had DM & HT as history of chronic disease in the control group.

The findings revealed that there is no difference between the experimental and control group. The chi square test also revealed that there was no statistically significant difference between the experimental and control group in relation to the clinical variables which established the homogeneity of the samples.

The first objective of the study was to assess the level of post test knowledge and post-discharge problems of CABG patients in experimental and control group.

The overall post test knowledge of the experimental group revealed that in the experimental group 21(70%) had adequate knowledge, 9(30%) had moderately adequate knowledge and none of them had inadequate knowledge. The mean score of the post test knowledge was found to be 20.73 with the standard deviation of 2.32. In the control group, 7(23.33%) had moderately adequate knowledge, 15(50%) had fairly adequate knowledge, 8(26.67%) had inadequate knowledge and none of them had adequate level of knowledge on home care management of CABG patients. The mean score of the post test knowledge was found to be 8.67 with the standard deviation of 3.13.

The findings revealed that the levels of post test knowledge of CABG patients in experimental group were found to be adequate when compared to the control group. The findings also indicated that the overall post test mean knowledge score of the experimental group was higher than the control group which revealed the effectiveness of information guide.

Considering the post discharge problems of CABG patients in the experimental group, 24(80%) had low level of post-discharge problems and 6(20%) had moderate level of post-discharge problems and none of them had high level of post discharge problems..The mean score of the post discharge problems was found to be 13.70 with the standard deviation of 4.03. In the control group, 12(40%) had high level of post – discharge problems, 18(60%) had moderate level of post – discharge problems and none of them had low level of post-discharge problems. The mean score of the post discharge problems was found to be 27.70 with the standard deviation of 2.98.

The findings indicated that the post discharge problems were less among experimental group and it was high for the control group which showed the effectiveness of information guide regarding home care management of CABG patients.

The findings of the study was supported by the following study,

Bednarski et al (2007), conducted a study to assess the patient's wound care knowledge and concerns prior to discharge from an acute care hospital. A questionnaire was used to assess the knowledge of patients, which included questions regarding health, wound care, beliefs about wound and their care, pain and wounds, literacy and learning, and discharge concerns. The study result showed that, patients with acute and chronic wound did not differ significantly in their concerns. Participants generally had appropriate knowledge regarding wound and hand washing, nutrition, and cigarette smoking but had inadequate knowledge regarding wound care and its consideration towards exposure to the environment.

The second objective was to assess the effectiveness of information guide regarding home care management of CABG patients on knowledge and post-discharge problems between experimental and control group.

The findings revealed that the post test mean knowledge score of experimental group was 20.73 with the standard deviation of 2.32 and the post test mean knowledge score of control group was 8.67 with the standard deviation of 3.13. The calculated unpaired ‘t’ value was **(t = 16.957 at p=0.000)** which indicated statistically significant difference between the experimental and control group .

The analysis also revealed that the mean post–discharge problems score of experimental group was 13.70 with the standard deviation of 4.03 and the mean post – discharge problems score of the control group was 27.70 with the standard deviation of 2.98. The calculated unpaired 't' value was (**t = 15.298 at p=0.000)** which indicated statistically significant difference between the experimental and control group .

The study findings revealed that the information guide was effective in increasing the level of knowledge regarding home care management and reducing the post discharge problems among CABG patients.

Therefore the null hypothesis which was stated earlier that **"There is no significant difference in post test level of knowledge and post discharge problems of CABG patients between experimental and control group" at p<0.05** was not accepted.

The findings of the study was supported by the following study,

Ozcan and Findik (2010), conducted a study to assess the information level of patients in discharge training given by nurses following open heart surgery. It was a prospective study with sample size of 50. The information level of patients who received discharge training was assessed before training and one month after training. Data were collected using personnel information form by pretest and post-test. The result of this study showed that patients were well informed after discharge training (P=0.05), and the age and marriage variables affected the information level (P= 0.032, P=0.045 respectively). The study concluded that discharge training after open -heart surgery increases the level of knowledge of patients.

The third objective of the study was to identify the relationship between the post-test knowledge and post-discharge problems of CABG patients in the experimental and control group.

Regarding correlation between post test knowledge and post discharge problems regarding home care management of CABG patients, the findings of the experimental group revealed that mean knowledge score of the experimental group was 20.73 with the standard deviation of 2.32 and the mean post discharge problems score was 13.70 with the standard deviation of 4.03.

The calculated Karl Pearson's correlation co-efficient 'r' value was **r= -0.670** which indicated the negative correlation which inturn revealed that there was a statistically significant relationship between the knowledge on home care management and post discharge problems.

The findings also indicated that when the level of knowledge increases, post discharge problem decreases. But the findings of control group revealed that there was no statistically significant relationship between the knowledge and post- discharge problems.

Therefore the null hypothesis which was stated earlier that **"There is no significant relationship between post-test level of knowledge and post discharge problems of CABG patients in experimental and control group." at p<0.05** was not accepted.

The study findings was supported by the following study,

Masoumeh Akbari (2015) conducted a semi experimental study on the effects of discharge training and counseling on post-discharge problems in patients undergoing coronary artery bypass graft surgery**.** This study was aimed at investigating the effect of planned discharge training and counseling on the problems experienced by 100 patients undergoing coronary artery bypass graft (CABG). The intervention groups were provided with adequate discharge training and counseling with a booklet before surgery and counseling until 6 weeks after discharge, while the control group patients received only routine clinical interventions. The findings revealed that due to the education programs, problems were found fewer in the intervention group than in the control group ($P < 0.05$).The study concluded that discharge training and counseling given to the intervention group had a positive impact on decreasing the post operative problems and recommended to support multi-disciplinary patient training, counselling and effective interventions.

The fourth objective was to associate the post test knowledge and post-discharge problems of CABG patients with their selected demographic variables in experimental and control group.

Considering the post test knowledge the findings revealed that in the experimental group there was statistically significant association found between the level of knowledge and the demographic variable education **(χ^2=12.638 at p<0.05)** and history of chronic disease **(χ^2=8.825 at p<.05).** The other demographic variables had not shown statistically significant association with post test level of knowledge among CABG patients in the experimental group.

Whereas in the control group, the findings revealed that none of the demographic variables had shown statistically significant association with post test level of knowledge among CABG patients in the control group.

Therefore the null hypothesis which stated earlier that **"There is no significant association between level of knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group." at p<0.05** was not accepted for the demographic variable education and history of chronic disease but accepted for other demographic variables in the experimental group.

Regarding the post discharge problems, the findings revealed that in the experimental group, there was statistically significant association was found between the level of post-discharge problems and the demographic variable gender **(χ^2=6.036 at p<0.05)** and monthly income **(χ^2=7.087at p<0.05)** and the other demographic variables had not shown statistically significant association with post discharge problems among CABG patients in the experimental group.

Whereas in the control group, the findings revealed that there was statistically significant association found between the level of post-discharge problems and the demographic variable type of family **(χ^2=5.000 at p<0.05)** and the other demographic variables had not shown statistically significant association with post discharge problems among CABG patients in the control group.

Therefore the null hypothesis which stated earlier that **"There is no significant association between level of knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group." at p<0.05** was not accepted for the demographic variable gender and monthly income, but accepted for other demographic variables in the experimental group.

The study findings was supported by the following study,

Meszaros K et.al (2016) conducted a surveillance study with an aim to evaluate whether risk factors for sternal wound infections vary with the type of surgical procedure in cardiac operations. The surveillance study of 3,249 consecutive patients (28% women) with median age 69 years were collected using median additive European System for cardiac operative risk evaluation score for (a) isolated coronary artery bypass grafting (CABG), (b) isolated valve repair or replacement, and (c) combined valve procedures and CABG. The findings revealed that CABG patients had 122(3.8%) sternal wound infections in 3,249 patients, which was not only due to procedure-related risk factors but also in relation to the bilateral internal thoracic artery harvest and patient characteristics (female, sex, diabetes, obesity, chronic obstructive pulmonary disease). The study concluded that preventive interventions may be justified according to the type of operation.

SUMMARY,

CONCLUSION,

IMPLICATION,

RECOMMENDATION

AND LIMITATION

CHAPTER – 6

SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATION AND LIMITATION

The study is aimed to assess the effectiveness of information guide regarding home care management of CABG patients. This chapter deals with summary, conclusion, implication, recommendation and limitation.

SUMMARY

Coronary artery bypass graft surgery (CABG) can prolong life for those with certain patterns of severe coronary heart disease. There are a number of post operative complications that may occur after the surgery. The nurses play a major role in providing care to the patients in all phases especially in the post–operative period. Hence, the enhancement of level of knowledge regarding the home care management of CABG patients, is important to reduce the post discharge problems of CABG patients.

The information guide focuses on enhancing the knowledge of CABG patients regarding home care management thereby reducing the post-discharge problems after getting discharged from the hospital.

STATEMENT OF THE PROBLEM

The statement of the problem was **"An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-Coronary Artery Bypass Graft patients at selected hospital in Chennai**. ''

The objectives of the study were

1. To assess the post test knowledge and post-discharge problems of CABG patients in experimental and control group
2. To assess the effectiveness of information guide regarding home care management of CABG patients on knowledge and post discharge problems between experimental and control group.

3. To identify the relationship between the post-test knowledge and post-discharge problems of CABG patients in the experimental and control group.
4. To associate the post test knowledge and post-discharge problems of CABG patients with their selected demographic variables in experimental and control group.

The study was based on the assumptions that

1. CABG patients need to have adequate information on home care management
2. Information guide enhances the knowledge of CABG patients and reduces the post discharge problems experienced by patients.

The Null hypotheses formulated were

NH_1: There is no significant difference in post test level of knowledge and post discharge problems of CABG patients between experimental and control group.

NH_2: There is no significant relationship between post-test level of knowledge and post discharge problems of post CABG patients in experimental and control group.

NH_3: There is no significant association between level of knowledge and post discharge problems of CABG patients with their selected demographic variables in experimental and control group.

The research methodology of the study was:

The research design used in this study was true experimental design and it was conducted in various Cardiac wards of Madras Medical Mission hospital, Chennai. The areas were allocated to both experimental and control group using simple random technique (lottery method). Participants were selected based on sample selection criteria. Informed consent was obtained from each individual who was selected for the study. On the third post operative day, the information guide on home care management of CABG was administered along with teaching using PPT. On the day of discharge a structured interview questionnaire was administered to assess the knowledge on home care management of CABG patients. While going home patients were given a checklist to assess the post discharge problems and the instructions were given to the patient to mark the checklist whenever they had any problem after going home.

Patients were followed up over telephone weekly. The same procedure was followed with control group but teaching intervention and Information guide was not provided. But they had been provided with the hospital routine instructions and discharge advice. The data were collected and were coded in the main coding sheet. The data were analyzed using descriptive and inferential statistics.

The major findings of the study were:

The findings revealed that majority of samples were in the age group of 51 – 60 yrs and were male. All samples were married and non-vegetarian belonging to nuclear family with DM & HT as history of chronic disease in both the experimental and control group. The chi- square test revealed that there was no statistically significant difference between the experimental and control group in relation to the demographic variables which established the homogeneity of the samples.

The overall post test knowledge of the experimental group revealed that in the experimental group 21(70%) had adequate knowledge, 9(30%) had moderately adequate knowledge and none of them had inadequate knowledge. The mean score of the post test knowledge was found to be 20.73 with the standard deviation of 2.32. In the control group, 7(23.33%) had moderately adequate knowledge, 15(50%) had fairly adequate knowledge, 8(26.67%) had inadequate knowledge and none of them had adequate level of knowledge on home care management of CABG patients. The mean score of the post test knowledge was found to be 8.67 with the standard deviation of 3.13.

The findings revealed that the levels of post test knowledge of CABG patients in experimental group were found to be adequate when compared to the control group. The findings also indicated that the overall post test mean knowledge score of the experimental group was higher than the control group which revealed the effectiveness of information guide.

Considering the post discharge problems of CABG patients in the experimental group, 24(80%) had low level of post-discharge problems and 6(20%) had moderate level of post discharge problems and none of them had high level of post discharge problems. .The mean score of the post discharge problems was found to be 13.70 with

the standard deviation of 4.03 in the experimental group. In the control group, 12(40%) had high level of post discharge problems, 18(60%) had moderate level of post discharge problems and none of them had low level of post discharge problems. The mean score of the post discharge problems was found to be 27.70 with the standard deviation of 2.98 in the control group.

The findings indicated that the post discharge problems were less among experimental group and it was high for the control group which showed the effectiveness of information guide regarding home care management of CABG patients.

The findings revealed that the post test mean knowledge score of experimental group was 20.73 with the standard deviation of 2.32 and the post test mean knowledge score of control group was 8.67 with the standard deviation of 3.13. The calculated unpaired 't' value was **(t = 16.957 at p=0.000)** which indicated statistically significant difference between the experimental and control group.

The analysis also revealed that the mean post discharge problems score of experimental group was 13.70 with the standard deviation of 4.03 and the mean post discharge problems score of the control group was 27.70 with the standard deviation of 2.98. The calculated unpaired 't' value was (**t = 15.298 at p=0.000)** which indicated statistically significant difference between the experimental and control group.

The study findings revealed that the information guide was effective in increasing the level of knowledge regarding home care management and reducing the post discharge problems among CABG patients.

CONCLUSION

This study assessed the effectiveness of information guide regarding home care management of CABG patients at a selected setting, Chennai. The findings concluded that the information guide regarding home care management provided for the CABG patients was very effective that enhanced their level of knowledge thereby reducing the post discharge problems of CABG patients in the experimental group.

NURSING IMPLICATION

Nursing Practice

1. Discharge planning should begin at the time of admission with a discharge checklist.
2. Prior Preparation of patients, before surgery will improve speedy recovery successfully .
3. A well planned discharge programme should be implemented, to promote self care ability in patients that will ease the transition to home.

Nursing Education

1. Discharge plan for various disease conditions should be incorporated in the curriculum that helps the student nurse to get an insight, about the importance of health teaching.
2. Staff education programs with regards to post operative complications and its prevention aspects should be incorporated.

Nursing Administration

1. The nurse administrator should take initiatives to prepare the checklist in discharge planning.
2. Make sure that the booklets regarding home care management are issued in all cardiac post operative wards.

Nursing Research

1. Nurse researcher should motivate the clinical nurses to apply the research findings in their daily nursing care activities and to bring out new innovative techniques used to promote comfort of the patient.
2. Dissemination of the findings through conferences, professional journals will make the application of research findings to be effective.

RECOMMENDATIONS

Based on the study findings, the recommendations are

1. Usage of information guide in the care of post operative patients undergoing CABG at The Madras Medical Mission hospital.

2. The study can be conducted for a larger group in different setting for better generalization of the findings.
3. The cultural background could be incorporated in the hospital for assessing the level of knowledge among CABG patients.
4. Effectiveness of other interventions like video assisted CD's could be administered.
5. A comparative study can be done to assess the effectiveness of information guide with other interventions.

LIMITATION

The study was conducted only among CABG clients, the same could be conducted for other cardiac procedures.

COMMUNICATION OF FINDINGS

The researcher is planning to communicate the findings either by a paper presentation or to publish the findings in an indexed journal so that the results can be generalized and utilized by all staff nurses working in the cardiac units.

UTILIZATION OF THE RESEARCH FINDINGS

The findings will be utilized in the cardiac wards of Madras Medical Mission hospital by preparing a protocol consisting of various components of post operative care regarding home care management and which can be taught by the staff nurses in preparing the patient for discharge. The researcher feels that the protocol will thus reduce the post discharge complications there by increasing the level of knowledge regarding home care management.

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APPENDICES

MMM COLLEGE
OF NURSING
Learn to Serve
A Unit of
The Madars Medical Mission

APPENDIX – A

To

Dr.S.Rajan

Director-Cardio thoracic Surgery

Institute of Cardio-vascular Diseases

Madras Medical Mission

Chennai-37

Respected Sir,

Greetings from MMM college of Nursing!

Sub: Requesting for permission to conduct study among cardiac post-operative patients.

This is to your kind notice that Ms.Amudha.V, is a bonafide student of MMM College of Nursing and currently undergoing MSc.(N) in the branch of Medical Surgical Nursing . As a part of her curriculum, she needs to conduct a study in the department of cardiology for her dissertation. I kindly request you to permit her to conduct the study on **"Effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at selected hospital in Chennai".** I assure that her study will not provide any risk to study subjects and she will be abide to the rules and regulations of the hospital activities will not be affected.

The same was presented before the ethical committee of the MMM Hospital. Kindlypermit her to do the pilot study and main study.

Kindly do the needful.

Thanking You

30/6/16

PROF. Dr. ROSALINE RACHEL, M.Sc., (N), Ph.D.(N)
PRINCIPAL
MMM COLLEGE OF NURSING
No.131, SAKTHI NAGAR,
NOLAMBUR, CHENNAI - 600 095.

THE MADRAS MEDICAL MISSION ★ INSTITUTE OF CARDIO-VASCULAR DISEASES ★ MOGAPPAIR, CHENNAI-600 037

Approved for conducting the Studies

Dr. S. Rajan
Director - Cardiac Surgery
Institute of Cardio - Vascular Disease
Madras Medical Mission
Chennai - 600 037.

MMM College of Nursing
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INSTITUTIONAL ETHICS COMMITTEE
THE MADRAS MEDICAL MISSION
No. 4-A, Dr. J.J. NAGAR, MOGAPPAIR, CHENNAI - 600 037, INDIA
Call : + 91 - 44 - 26561801, 26565961, 26565991 Fax : 91 - 44 - 26565859
E-mail : icvddoctors@mmm.org.in Website : http://www.mmm.org.in

To,

Date: 27 Jun 2016

Dr.V.M. Kurian,
Member Secretary,
Institutional Ethics Committee,
Madras Medical Mission,
Chennai

Sub: Submission of document to EC for review and approval.

Ref: An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at MMM hospital in chennai.

Dear Dr.V.M. Kurian,

Please find along with this letter 6+1 copies of the following document with reference to the above mentioned study.

1. Protocol
2. Informed Consent Form
3. Assessment tool

I look forward to a favorable reply from the committee in the upcoming EC meeting. Kindly revert in case of any queries.

Thanks and regards,

Yours sincerely,

Ms. Amudha
MMM College of Health Science

Acknowledgment of Receipt	
Received by: (Signature and Stamp)	**Date:** 27/June/2016

Dr.V.M. KURIAN
Member Secretary
Institutional Ethics Committee
The Madras Medical Mission
No. 4-A, J.J. Nagar, Mogappair,
Chennai - 600 037.

INSTITUTIONAL ETHICS COMMITTEE
THE MADRAS MEDICAL MISSION
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Call : + 91 - 44 - 26561801, 26565961, 26565991 Fax : 91 - 44 - 26565859
E-mail : icvddoctors@mmm.org.in Website : http://www.mmm.org.in

To **Date: 27 Jul 2016**

Ms. Amudha
MMM College of Nursing
Madras Medical Mission,
Chennai 600037

EC Reg no: ECR/140/Inst/TN/2013

Ref: An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at MMM hospital in chennai.

Sub: Ethics Committee approval of study document for the above mentioned study.

Dear Ms. Amudha

We have received from you 06+1 copies of each of following study related document submitted vide letter dated: 27 Jun 2016

1. Protocol
2. Informed Consent Form
3. Tools

At the Ethics Committee meeting held on 09 Jul 2016 your referenced letter and the above documents were examined and discussed. After due consideration, the committee has decided to approve the above-mentioned study.
The following members were present at the meeting held on 09 Jul 2016 at 9-30 AM – 11:30AM at Mount Tabour Lounge, Madras Medical Mission.

Name & Qualification	Primary Scientific or Non scientific Specialty	Affiliation with the institution	Gender
Dr. M.S. Ramachandran, MBBS,MD,FRCP,FICP,DSC(HONS), Prof.Director medicine(Rtd)	Chairperson	No	M
Dr V M Kurian, MS, MCh, DPMR. Sr. Consultant cardiovascular Surgeon Madras Medical Mission	Member secretary	Yes	M
Rev.Fr. Ninan Chacko, MA,DPS, Chaplain Theologist, ICVD, Madras Medical Mission	Non-Clinical Member Theologist/Layperson	Yes	M

Dr Ajit Mullasari, MD DNB DM, Director of cardiology, Madras Medical Mission	Member Clinician	Yes	M
Dr J. Ezhilan, MD, DM , DNB, FNB., Sr. Consultant cardiovascular Cardiologist Madras Medical Mission	Member, Clinician	Yes	M
Dr. Suma Malini Victor, MBBS, DNB., Consultant Cardiologist, Madras Medical Mission	Member, Clinician	Yes	F
Dr. Chitrasree V, MBBS,DCP Coordinator, Consultant Lab services, Madras Medical Mission	Member, Basic Medical Scientist	Yes	F
Mr. Ravi Kumar Paul, LLB Paul & Paul B.A., B.L., Advocates Chennai.	Member Legal Expert	No	M
Dr. C.B Tharani, M.D. Pharmacology	Pharmacologist	No	F
Mrs. Dhavaselvi Rajan , B.sc – Home science	Member, Lay person	No	F

The Committee expects from the Principal Investigator to report the clinical study on annual basis.

It was to be noted that neither you nor any of your proposed study team members were present during the decision-making procedures of the Ethics Committee.

Yours truly,

Signature: _____ **Date:** 22 | July | 2016

Name: Dr V M Kurian
Title: Member secretary

Dr.V.M. KURIAN
Member Secretary
Institutional Ethics Committee
The Madras Medical Mission
No. 4-A, J.J. Nagar, Mogappair
Chennai - 600 037

APPENDIX – C

PATIENT CONSENT FORM

Respected Sir/ Madam,

I am obtaining my M.Sc in Nursing at MMM College of Nursing, Chennai for which I am doing research on an experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems of coronary artery bypass graft patients. I kindly request you to participate and provide the baseline information about you.

I expect your co-operation for the intervention after your cardiac surgery.

I assure you that the details you provided will be used for my research only and will be kept confidential.

The participation is not compulsory and you can withdraw from the study at anytime.

I also assure that the intervention provide will not harm you at any cost.

Amudha.V,
M.Sc Nursing Student
MMM College of Nursing

I would like to participate in the study.

Signature of the Participant:

Date:

APPENDIX – D

TOOL FOR DATA COLLECTION

PART 1: DEMOGRAPHIC DATA

1. Age

a. 30-40 Years ☐
b. 41-50 Years ☐
c. 51-60years ☐
d. Above 60 years. ☐

2. Gender

a. Male ☐
b. Female ☐

3. Marital status

a. Married ☐
b. Single ☐
c. Separated ☐
d. Widowhood ☐

4. Religion

a. Hindu ☐
b. Christian ☐
c. Muslim ☐
d. Others ☐

5. Education

a. Illiterate ☐
b. Primary school ☐
c. Middle school ☐
d. High school ☐
e. Intermediate ☐
f. Graduate and above ☐
g. Profession ☐

6. **Occupation**

a. Unemployed ☐
b. Unskilled worker ☐
c. Semiskilled worker ☐
d. Skilled worker ☐
e. Clerical, Shop owner, Farmer ☐
f. Semi-profession ☐
g. Profession ☐

7. **Monthly income**

a) < 1589 ☐
b) 1590 – 4726 ☐
c) 4727 – 7877 ☐
d) 7878- 11,816 ☐
e) 11817-15753 ☐
f) 15,754-31,506 ☐
g) >31507 ☐

8. **Type of food**

a) Vegetarian ☐
b) Non- Vegetarian ☐
c) Ova- Vegetarian ☐
d) Lacto- Vegetarian ☐

9. **Type of family**

a) Nuclear ☐
b) Joint ☐
c) Extended ☐

10. **History of chronic disease**

a) Diabetes mellitus ☐
b) Hypertension ☐
c) DM & HT ☐
d) Others (osteoarthritis , chronic respiratory diseases, cancer) ☐
e) None ☐

PART 2: STRUCTURED INTERVIEW QUESTIONNAIRE TO ASSESS THE KNOWLEDGE ON HOME CARE MANAGEMENT OF CABG PATIENTS

[INSTRUCTIONS TO BE FOLLOWED]

1. Read the questions carefully

2. Put tick mark against the correct option

3. Each question carries 4 options among which only one is correct

4. Each correct answer carries score '1' & the incorrect answer as score '0']

GENERAL:

1. What do you mean by CABG?

a. Surgery done for lung problems

b. Surgery done for coronary artery disease

c. Surgery done for renal problems

d. Surgery done for respiratory distress

2. What is the major symptom for coronary artery disease?

a. Back pain

b. Fatigue

c. Chest pain

d. Shortness of breath

3. What are the indications for CABG?

a. Triple vessel disease

b. Normal coronaries

c. Heart failure

d. Systemic hypertension

4. Which of the following vein is taken for CABG grafting ?

a. Femoral vein

b. Saphaneous vein

c. Branchial vein

d. Cephalic vein

INCISIONAL CARE:

5. What will you do if itching occurs at the wound site?

    a. Avoid touching, scratching and rubbing of wounds

    b. Apply powder or creams when itching

    c. Wear tight clothes

    d. Clean with solutions

6. Which of the following instructions should not be done, when leg incision is made

    a. Should not cross legs

    b. Wear stockings or crepe bandages

    c. Perform relaxing exercises

    d. Keep your lower legs to dangle

7. The bathing instructions that should not be followed is to

    a. Take shower on your back

    b. Bath in sitting position

    c. Pat the surgical site with towel after bathing

    d. Apply powder to the incisional site

8. Which of the following is not the sign of infection at wound site

    a) Oozing out of yellow color discharge

    b) Gapping of skin edge

    c) Pinkish colour without discharge

    d) Fever >38 degree

9. The chest incisional wound site can be

    a) Covered with tight fitting clothes

    b) Left open in air

    c) Exposed to direct sunlight

    d) Touched without hand washing

DRESSING:

10. Which instruction should not be followed while dressing ?

a. Put the belt loops after putting pants

b. Dress in sitting position

c. Do not reach behind & avoid over bending

d. Reach behind to dress up

DIET:

11. Which of the foods that can be taken after the surgery?

a Meat with skin removed, whole grains.

b. Bajji, samosa

c. Butter ,cheese

d. Fried rice, vada.

12 Salt content foods are

a. Pickles, Saltfish, Papads

b. Samba, Bread

c. Beans, legumes

d. Tomato juice, oats

EXERCISE:

13. Exercise that can be done outside is

a. Jogging for 20min

b. Warm up and cool down exercises for 5-10min

c. Breathing exercises

d. Muscle relaxation exercises

14. Which of the following instruction should not be followed while going for walking exercise?

a. Take water along with you

b. Wear proper fitting shoes

c. Talk in cell phone

d. Avoid slippery or uneven floors

ACTIVITIES

15. Which of the following activity is restricted while getting out of bed ?

a. Turn towards one side

b. Support with chest pillow with one hand

c. Seek support of the assistance

d. Get up directly from supine position.

16. The sign which is not an indication to stop exercise is

a. Decreased co-ordination

b. Excessive sweating

c. Chest pain

d. Feeling thirsty

17. The activity that can be carried out is

a. Pulling and pushing of weights

b. Handling pets outside for walking

c. Bending too forward

d. Walking

DRIVING:

18. While in driving always

a) Talk to the companion

b) Wear seat belt

c) Take alcohol

d) Listen to music

TRAVELLING:

19. The instructions that should not be followed while travelling is

a. Walk and stretch your legs at least once an hour.

b. Take all medications with you

c. Wear seatbelt

d. Listen to music while driving

20. The rationale behind stretching of leg muscles while on travelling with rest is

    a. Prevents clot formation

    b. Compulsory exercise

    c. Reduces leg pain

    d. Promotes sense of well being

LIFE STYLE MODIFICATION:

21. Life style modification includes

    a. Quit smoking

    b. Alcohol intake

    c. Continue long naps

    d. Remain in stress

STRESS MANAGEMENT:

22. Which of the following is not the relaxation technique to reduce stress?

    a) Watching thrill movies

    b) Listening to melodious music

    c) Meditation

    d) Reading newspaper

23. Laughing therapy is one of the

    a. Exercise

    b. Method to reduce tension

    c. Restricted activities

    d. Tips to save energy

RESUMING SEXUAL ACTIVITIES:

24. The instructions that should not be followed while resuming sexual activity is

    a. Get doctor's opinion

    b. Safe positions

    c. Sternal precautions

    d. Before wound healing

FOLLOW-UP:

25. Which of the following records to be brought on review along with discharge summary?
    a. Booklets
    b. Old reports before treatment
    c. Medical records if carried out in other hospitals
    d. Medications

ANSWER KEY:

1. b
2. c
3. a
4. b
5. a
6. d
7. d
8. c
9. b
10. d
11. a
12. a
13. a
14. c
15. d
16. c
17. d
18. b
19. d
20. a
21. a
22. a
23. b
24. d
25. c

PART : 3 CHECKLIST TO ASSESS THE POST DISCHARGE PROBLEMS OF CABG PATIENTS

Instruction: Kindly tick on the corresponding week, if you have experienced any one of these post discharge problems mentioned below.

S.No.	POST DISCHARGE PROBLEMS EXPERIENCED	WEEK 1		WEEK 2		WEEK 3		WEEK 4	
		Y	N	Y	N	Y	N	Y	N
1	**RESPIRATORY SYSTEM**								
	a) Breathing difficulty								
	b) Shortness of breath								
2.	**CARDIO VASCULAR SYSTEM**								
	a) Palpitation								
	b) Change in blood pressure								
3.	**GASTRO INTESTINAL SYSTEM**								
	a) Nausea								
	b) Vomiting								
	c) Diarrhoea								
	d) Constipation								
4.	**INCISIONAL SITE:**								
	Edema:								
	a) Leg wound								
	b) Chest wound								
	c) Leg &chest wound								
	Drainage:								
	d) Chest wound								
	e) Leg wound								
	f) Leg & Chest Wound								
	Wound redness								
	g) Chest wound								
	h) Leg wound								
	i)Leg & Chest Wound								

S.No.	POST DISCHARGE PROBLEMS EXPERIENCED	WEEK 1		WEEK 2		WEEK 3		WEEK 4	
		Y	N	Y	N	Y	N	Y	N
5.	**PAIN**:								
	a) Back pain								
	b) Chest pain								
	c) Shoulder pain								
	d) Neck pain								
6.	**NEUROLOGICAL:**								
	a) Dizziness								
	b) Fatigue								
7.	**PSYCHOLOGICAL**								
	a) Fear								
	b) Introversion								
	c) Pessimism								
	d) Attention deficit problem								
8.	**SOCIAL**								
	a) Refusal to see visitors								
	b) Avoiding social contacts								
9.	**SLEEP**								
	a) Sleeplessness								
	b) Difficulty in falling asleep								
10.	**OTHERS**								
	a) Fever								
	b) Abdominal distention								
	c) Headache								
	d) Numbness								
	e) Cold								
	f) Weakness								

தகவல் சேகரிப்பு முறை

பகுதி *1:* மக்களைப் பற்றிய தகவல்

1. வயது

அ.*30-40* வயது □

ஆ.*41-50* வயது □

இ.*51-60* வயது □

ஈ.*61* வயதிற்கு மேல் □

2. பாலினம்

அ.ஆண் □

ஆ.பெண் □

3. திருமண நிலை

அ. திருமணம்ஆனவர் □

ஆ.திருமணம்ஆகாதவர் □

4. மதம்

அ.இந்து □

ஆ.கிறிஸ்தவர் □

இ.இஸ்லாமியர் □

5. கல்வித்தகுதி

அ.முறையான கல்வி பெறாதவர் □

ஆ.ஆரம்பபள்ளி □

இ.உயர்நிலைப்பள்ளி □

ஈ.மேல்நிலைப்பள்ளி □

உ.பட்டதாரிஅதற்கும்அதிகமாக □

6. தொழில்

அ.வல்லுநர் □

ஆ.திறமையான தொழிலாளி □

இ.வேலை வாய்ப்பில்லாதவர் □

ஈ.ஓய்வுபெற்றவர் □

7. மாத வருமானம்

அ. *1589* க்கு குறைவாக □

ஆ. *1590* - *4726* □

இ. *4727* - *7877* □

ஈ. *7878* - *11,816* □

உ. *11,817* - *15,753* □

ஊ. *15,754* - *31,506* □

எ. *31,507* க்குமேல் □

8. உணவு பழக்கம்

அ.சைவம் □

ஆ.அசைவம் □

இ.சைவம் -முட்டைஉண்போர் □

ஈ.சைவம்-முட்டை, அசைவம் தவிர்த்து பால் மற்றும் அதன் உபபொருட்கள் (சீஸ், தயிர் போன்றவை) உண்போர் □

9. குடும்ப முறை

அ.தனிக்குடும்பம் □

ஆ.கூட்டுக்குடும்பம் □

இ.நீடிக்கப்பட்ட கூட்டுக்குடும்பம் □

10. நாள்பட்ட நோய் வரலாறு

அ.சர்க்கரை நோய் □

ஆ.உயர் இரத்த அழுத்தம் □

இ.சர்க்கரை நோய்& உயர் இரத்த அழுத்தம் □

ஈ.வேறு(கீழ்வாதம், நாள்பட்ட சுவாச நோய்கள், புற்றுநோய்) □

பகுதி 2: கரோனரி இதயபைபாஸ்ஒட்டு அறுவை சிகிச்சைக்குப் பிந்தைய (CABG) வீட்டு பாதுகாப்பு முறைகளை கையாளுதல் பற்றிய அறிவை சோதிக்க வடிவமைக்கப்பட்டகேள்விகள்

கடைபிடிக்க வேண்டிய அறிவுரைகள்

1. ***கேள்விகளை கவனமாக வாசிக்கவும்***
2. ***சரியான பதிலுக்கு எதிரே ✓ இடவும்.***
3. ***ஒவ்வொரு கேள்விக்கும் 4 பதில்கள் உண்டு. ஆனால் 4ல் ஒன்று தான் சரியான பதில்.***
4. ***ஒவ்வொரு சரியான பதிலுக்கும் 1 மதிப்பெண்ணும், தவறான பதிலுக்கு 0 மதிப்பெண்ணும் உண்டு.***

<u>பொதுவான கேள்விகள்</u>

1. *கரோனரி இதய பைபாஸ் ஒட்டு அறுவை சிகிச்சை (CABG) என்றால் என்ன?*
    a. *நுரையீரல் பிரச்சனைகளுக்காக செய்யப்படும் அறுவைசி கிச்சை*
    b. *கரோனரி இதய நோய்க்கான அறுவை சிகிச்சை*
    c. *சிறுநீரக பிரச்சனைகளுக்காக செய்யப்படும் அறுவை சிகிச்சை*
    d. *சுவாச பிரச்சனைகளுக்காக செய்யப்படும் அறுவை சிகிச்சை*

2. *கரோனரி இதய நோய்க்கான முக்கிய அறிகுறி என்ன?*
    a. *முதுகு வலி*
    b. *மிகுதியான சோர்வு*
    c. *நெஞ்சு வலி*
    d. *மூச்சு திணறல்*

    \

3. *கரோனரி இதய பைபாஸ் ஒட்டு அறுவை சிகிச்சைக்கான (CABG) அறிகுறிகள் என்ன?*
    a. *டிரிப்பிள் நாள வியாதி*
    b. *இயல்பான கரோனரிகள்*
    c. *இதய செயலிழப்பு*
    d. *தொடர்ச்சியான உயர் இரத்த அழுத்தம்*

4. *கீழே உள்ள எந்த நரம்பு கரோனரி இதயபை பாஸ்ஒட்டு அறுவை சிகிச்சைக்கு (CABG) எடுக்கப்படும்?*
    a. *தொடை சார்ந்த நரம்பு*

b. காலில் உள்ள நீளமான நரம்பு
c. செவுளில் உள்ள நரம்பு
d. தலைக்குரிய நரம்பு

மார்புக் கீறல், கால் கீறல் பாதுகாப்பு

5. அறுவை சிகிச்சை செய்யப்பட்ட காயத்தில் அரிப்பு ஏற்பட்டால் நீங்கள் என்ன செய்வீர்கள்?
   a. காயத்தை தொடுவதை, தேய்ப்பதை, சுரண்டுவதை தவிர்ப்போம்.
   b. அரிப்பு ஏற்படும் பொழுது பவுடர் அல்லது கிரீம் போடுவது
   c. அதிக இறுக்கமான ஆடைகளை உடுத்துவது
   d. சோல்யூசன் கொண்டு துடைத்து, சுத்தம் செய்வது.

6. கால் கீறல் செய்த பிறகு கீழே உள்ள எவைகளை செய்யக் கூடாது
   a. கால்களை குறுக்கு வடிவத்தில் வைக்ககூடாது
   b. காலுறைகள் மற்றும் Crepe கட்டுத்துணிகள் அணிவது
   c. ஆசுவாசப்படுத்தும் பயிற்சிகள் செய்வது
   d. உங்கள் கால்களை ஊசலாட்டுவது.

7. கீழே உள்ள குளியல் அறிவுரைகளில் பின்பற்ற வேண்டியவை எது?
   a. முதுகுப்புறமாக தண்ணீர் படும்படி குளிப்பது
   b. உட்கார்ந்த நிலையில் குளிப்பது
   c. குளித்து முடித்த பின் அறுவை சிகிச்சை காயத்தை துண்டு கொண்டு ஒற்றி எடுப்பது
   d. அறுவை சிகிச்சை காயத்தில் பவுடர் போடுவது.

8. கீழே உள்ளவைகளில் அறுவை சிகிச்சை காயத்தில் தொற்றுக்கான அறிகுறிகள் உள்ளது எது?
   a. மஞ்சள் நிறத்தில் சீழ்வடியத் தொடங்குவது
   b. தோல் விளிம்புகள் சேரும் இடங்களில் விரிசல் ஏற்படுவது
   c. பிங்க் நிறத்தில் மாறி சீழ் வடியாமல் இருப்பது
   d. 100 டிகிரி அல்லது அதற்கு மேல் காய்ச்சல் (ஜூரம்) இருத்தல்

9. மார்பில் அறுவை சிகிச்சை செய்ததினால் வந்த காயத்தை
   a. இறுக்கமான ஆடையணிந்து மூடலாம்
   b. காற்று பட திறந்து வைத்தல்
   c. சூரிய ஒளி நேரடியாக பட அனுமதித்தல்

d. கைகளை கழுவாமல் தொடுதல்

உடைகள்

10. கீழே உள்ளவைகளில் உடையணியும் போது பின்பற்ற வேண்டியவை எது?

a. இடைவார் (பெல்ட்) அணியும் முன் பேண்டில் அல்லது ஸ்கர்ட்டில் கோர்த்து விட்டு பின் அணிதல்.

b. நின்று கொண்டு உடை அணிதல்

c. கைகளை பின்னால் கொண்டு செல்லாமல் இருப்பது; கீழே அதிகம் குனியாமல் இருப்பது

d. உடை அணிய கைகளை பின்னால் கொண்டு செல்வது

உணவு

11. அறுவை சிகிச்சைக்குப் பின் உண்ணக் கூடிய உணவுகள் யாவை?

a. தோல் நீக்கிய இறைச்சி, முழுதானியம்

b. பஜ்ஜி, சமோசா

c. வெண்ணெய், சீஸ்

d. ஃப்ரைட்சாதம், வடை

12. உப்பு நிறைந்த உணவுகள்

a. ஊறுகாய், அப்பளம், கருவாடு

b. பேக்கிங் செய்யப்பட்ட உணவுகள், பிரட்

c. பீன்ஸ், பருப்பு வகைகள்

d. ஓட்ஸ், தக்காளி ஜீஸ்.

உடற்பயிற்சிகள்

13. கீழே உள்ளவைகளில் வீட்டில் செய்ய வேண்டிய உடற்பயிற்சிகள் உள்ளன ஒன்றைத் தவிர அது எது?

a. 20 நிமிடம் மிதமாக ஓடுதல்

b. நடைபயிற்சிக்கு முன்னும் பின்னும் செய்ய வேண்டிய 5-10 நிமிடங்கள் பயிற்சிகள்.

c. சுவாச பயிற்சிகள்

d. தசைகளை தளர்த்தும் பயிற்சிகள

14. நடைபயிற்சிக்கு செல்லும் போது கவனிக்க வேண்டிய காரியங்கள் எது?

a. குடி தண்ணீர் எடுத்து செல்வது

b. சரியான காலணிகள் (ஷூ) அணிவது

c. செல்போனில் உரையாடுவது

d. கடினமான, சமதளமற்ற பாதைகளைத விர்ப்பது

<u>நடவடிக்கைகள்</u>

15. படுக்கையை விட்டு எழும் போது பின்பற்ற வேண்டிய அறிவுரைகள் எது?

a. ஒரு பக்கம் திரும்புவது

b. ஒருகையால் மார்புத் தலையணையை வைத்து தாங்குவது

c. உதவும் நபரிடம் உதவி கேட்பது

d. மல்லாந்து படுத்திருக்கும் பொழுதே எழுந்து விடுவது

16. உடற்பயிற்சி செய்வதை நிறுத்த சில அறிகுறிகள் கீழே கொடுக்கப்பட்டுள்ளன அது எது?

a. உறுப்புகிளுக்கிடையே குறையும் ஒருங்கிணைப்பு

b. அதிகப்படியான வியர்வை

c. நெஞ்சுவலி

d. தண்ணீர் தாகம்

17. கீழே உள்ளவைகளில் எந்த நடவடிக்கை தடை செய்யப்பட்ட நடவடிக்கை?

a. பலுவை தூக்குவது, தள்ளுவது

b. செல்லப் பிராணிகளை நடைப்பயிற்சிக்கு தூக்கி செல்வது

c. அதிகமாக குனிவது

d. நடப்பது

<u>வாகனம்ஓட்டுதல்</u>

18. வாகனம் ஓட்டும் பொழுது எப்பொழுதும்

a. உடனிருப்பவரிடம் பேசுங்கள்

b. சீட்பெல்ட் அணியுங்கள்.

c. மது அருந்துங்கள்

d. இசையை கேளுங்கள்

பயணம்

19. பயணம் செய்யும் போது கடைபிடிக்க வேண்டிய அறிவுரைகள் கீழே உள்ளது எது?

a. ஒரு மணி நேரத்திற்கு ஒரு முறை எழுந்து, சற்று நடந்து, கால்களை நீட்டி மடக்குதல்
b. மருந்து மாத்திரைகளை எடுத்துச் செல்லுதல்
c. சீட்பெல்ட் அணிதல்
d. வாகனம் ஓட்டும் போது இசை கேட்டல்

20. பயணத்தின் போது ஒரு மணி நேரத்திற்கு ஒருமுறை கால்களை நீட்டி மடக்குவதின் பின் உள்ள கருத்து

a. இரத்த ஓட்டத்தை சீர்படுத்தும்
b. கண்டிப்பான உடற்பயிற்சி
c. கால்வலியை குறைக்கும்
d. ஆரோக்கியத்தை மேம்படுத்தும்

வாழ்க்கைமுறை மாற்றங்கள்

21. வாழ்க்கைமுறை மாற்றங்கள் எவைகள்

a. புகைபிடிப்பதை தவிர்ப்பது
b. மதுவை தவிர்ப்பது
c. நீண்ட நேரம் உறங்குவது
d. மன அழுத்ததில் இருப்பது

மன அழுத்தத்தை கையாளுதல்

22. மன அழுத்தத்தை குறைத்து அமைதி படுத்த கீழே உள்ளவகளில் எதை செய்ய வேண்டும்

a. திரில் திரைப்படங்கள் பார்க்க வேண்டும்
b. இனிமையான இசையை கேட்க வேண்டும்
c. தியானம் செய்ய வேண்டும்
d. செய்திதாள் படிக்க வேண்டும்

23. லாஃபிங்தெரபி ஒரு

a. உடற்பயிற்சி
b. மனஅழுத்தத்தை குறைக்க ஒரு வழி
c. கட்டுப்படுத்த வேண்டிய நடவடிக்கை
d. உடற்சோர்வை குறைத்து, ஆற்றலை பாதுகாக்க

தாம்பத்ய உறவை தொடர்தல்

24. தாம்பத்ய உறவை தொடர்வதில் கீழே உள்ளவைகளில் ஒன்றை செய்யக்கூடாது அது எது?

a. மருத்துவரிடம் ஆலோசனை பெறுங்கள்

b. பாதுகாப்பான தாம்பத்ய உறவு நிலைகளை பின்பற்றுதல்

c. காயங்களை பாதுகாத்தல்

d. உடற்பயிற்சிக்கு பிறகு தாம்பத்ய உறவு கொள்ளுதல்

மருத்துவருடன் ஆலோசனை

25. மருத்துவரை சந்திக்க வரும் போது டிஸ்சார்ஜ் அறிக்கையோடு கொண்டு வர வேண்டிய ஆவணங்கள்

a. புத்தகங்கள்

b. அறுவை சிகிச்சைக்கு முந்தைய மருத்துவ அறிக்கைகள்

c. வேறு மருத்துவமனையில் அறுவை சிகிச்சை நடந்திருந்தால் அந்த ஆவணங்கள்.

d. மருந்துகள்

பகுதி 3: கரோனரி இதய பைபாஸ் செய்து டிஸ்சார்ஜ் ஆன நோயாளிகளின் பிரச்சனைகளை மதிப்பிடும் சரிபார்ப்பு பட்டியல்

கவனிக்க: டிஸ்சார்ஜ் ஆன பிறகு கீழே குறிப்பிட்டுள்ள பிரச்சனைகளை சந்தித்திருப்பீர்கள் என்றால் அந்த அந்த வாரத்திற்கு நோய் குறிக்கவும்.

வ. எண்	டிஸ்சார்ஜ் ஆன பிறகு நீங்கள் சந்தித்த பிரச்சனைகள்	வாரம்1		வாரம் 2		வாரம் 3		வாரம் 4	
		ஆம்	இல்லை	ஆம்	இல்லை	ஆம்	இல்லை	ஆம்	இல்லை
1	**சுவாசஅமைப்பு**								
	அ. சுவாசிக்க கடினம்								
	ஆ. மூச்சுத் திணறல்								
2	**கார்டியோவாஸ்குலர் அமைப்பு**								
	அ. படபடப்பு								
	ஆ. இரத்த அழுத்தத்தில் மாற்றம்								
3	**இரைப்பைகுடல் அமைப்பு**								
	அ. குமட்டல்								
	ஆ. வாந்தி								
	இ. வயிற்றுப் போக்கு								
	ஈ. மலச்சிக்கல்								
4	**அறுவை சிகிச்சையின் காயம் வீக்கம்:**								
	அ. கால் கீறலின் காயம்								
	ஆ. மார்புக் கீறலின் காயம்								
	இ. கால் & மார்பு காயம்								
	சீழ், நீர்வெளியேற்றம்								
	ஈ. கால் கீறலின் காயம்								
	உ. மார்புக் கீறலின் காயம்								
	ஊ. கால் & மார்பு காயம்								
	காயம் சிவத்தல்								
	எ. கால் கீறலின் காயம்								
	ஏ. மார்புக் கீறலின் காயம்								
	ஐ. கால் & மார்பு காயம்								
5	**வலி**								
	அ. முதுகு வலி								
	ஆ. நெஞ்சு வலி								
	இ. தோள்பட்டை வலி								
	ஈ. கழுத்து வலி								
6	**நரம்பியல்**								
	அ. தலைச்சுற்றல்								
	ஆ. அதிகமான சோர்வு								

வ. எண்	டிஸ்சார்ஜ் ஆன பிறகு நீங்கள் சந்தித்த பிரச்சனைகள்	வாரம்1		வாரம் 2		வாரம் 3		வாரம் 4	
		ஆம்	இல்லை	ஆம்	இல்லை	ஆம்	இல்லை	ஆம்	இல்லை
7	**உளவியல்**								
	அ. பயம்								
	ஆ. தன்னை, தன் நிலையை பற்றி யோசித்தல்								
	இ. அவநம்பிக்கை								
	ஈ. என் மீது கவனம் இல்லை என்று வருந்துதல்								
8	**சமூகம்**								
	அ. பார்வையாளர்களை சந்திக்க மறுத்தல்.								
	ஆ. சமூக தொடர்புகளை தவிர்த்தல்								
9	**தூக்கம்**								
	அ. தூக்கமின்மை								
	ஆ. தூங்குவதற்கு கஷ்டப்படுதல்								
10	**பிறகாரியங்கள்**								
	அ. காய்ச்சல்								
	ஆ. வயிற்றில் வாயு தொல்லை								
	இ. தலைவலி								
	ஈ. உணர்வின்மை								
	உ. ஜலதோஷம்								
	ஊ. பலவீனம்								

HEALTH TEACHING PLAN ON HOME CARE MANAGEMENT FOR CORONARY ARTERY BYPASS GRAFT [CABG] PATIENTS

NAME OF THE NURSE	**:**	AMUDHA .V
TOPIC	**:**	HOMECARE MANAGEMENT OF CABG PATIENTS
METHOD OF TEACHING	**:**	LECTURE CUM DISCUSSION
TEACHING AIDS	**:**	POWER POINT PRESENTATION
DATE	**:**	02/01/2017-31/01/2017
DURATION OF TEACHING	**:**	30 MIN
VENUE	**:**	Madras Medical Mission HOSPITAL

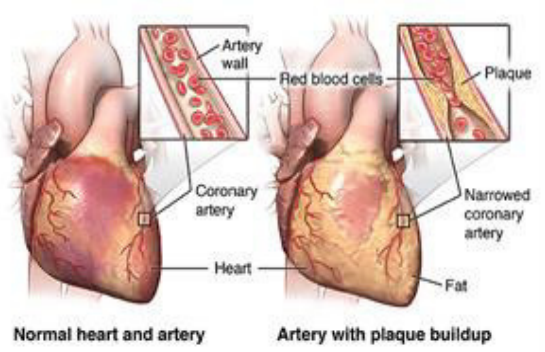
GENERAL OBJECTIVES: At the end of the health teaching the patient will be able to gain in depth knowledge regarding home care management and acquire positive attitude towards progression of health status and develop skills in self care ability at home.

SPECIFIC OBJECTIVES: At the end of the health teaching the patient will be able to

- briefly describe the importance of home care management
- describe the Coronary Artery Bypass Graft (CABG) surgery
- list down the indications for Coronary Artery Bypass Graft (CABG) surgery
- define coronary artery disease
- mention the signs and symptoms of coronary artery disease
- explain the home care management on various aspects
- recapitulate the interventional procedures

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
1.	1min	briefly describe the importance of home care management after discharge.	Heart surgery can be physically & emotionally draining. Modern technology has advanced the surgical treatment of heart disease where today most heart surgery patients do well and are able to return to their usual work and activities. Your surgery can improve the quality of your life, but surgery does not work by itself. You must do what you can, to keep heart healthy. Every patient is different; therefore, your physician's recommendations are the most important guidelines for your recovery. You will need time to recover, usually 8-12 weeks after going home. Normally, the initial healing of the sternum (breastbone) and incisions takes approximately six to eight weeks. Full regaining of your strength may take up to three	Power Point Slide	Probing Question: The nurse describes the importance of home care management after discharge.	Active Listening	

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			months. Each day you will make progress. Your activity level will increase and you will feel better. We expect you to gradually return to all the usual activities you enjoyed before your operation.				
2.	1min	describe the Coronary Artery Bypass Graft (CABG) surgery.	Coronary artery bypass graft surgery (CABG) is a procedure used to treat Coronary Artery Disease (CAD). Coronary artery bypass graft surgery re-routes blood flow around one or more blockages in the coronary (heart) arteries. This restores the blood supply to the heart muscle. The arteries used are the internal thoracic or internal mammary artery located inside of the breast bone. The radial artery located in the forearm can also be used. The most commonly used vein is the saphenous vein, located in the leg.	Power Point Slide	Lecture and discussion The nurse describes the Coronary Artery Bypass Graft (CABG) surgery	Listens and asks doubts	What is CABG?

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
							
3.	1min	list down the indications for Coronary Artery Bypass Graft (CABG) surgery	Class I indications for CABG from the **American Heart Association** (AHA) are as follows, • Left main coronary artery stenosis • Stenosis of proximal LAD • Proximal circumflex • Triple vessel disease	Power Point Slide	Lecturing	Active listening	list down the indications for Coronary Artery Bypass Graft (CABG) surgery

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
4	1min	define a Coronary Artery Disease	**CAD** is the narrowing of the coronary arteries – the blood vessels that supply oxygen and nutrients to the heart muscle. CAD is caused by a build-up of fatty material within the walls of the arteries. This build-up narrows the inside of the arteries, limiting the supply of oxygen-rich blood to the heart muscle.	Power Point Slide	lecturing the nurse defines Coronary Artery Disease	Active listening	define Coronary Artery Disease
5	1min	mention the signs and symptoms of Coronary Artery Disease	• Chest pain • Fatigue (severe tiredness) • Palpitations • Abnormal heart rhythms • Shortness of breath • Swelling in the hands and feet.	Power Point Slide	lecture and discussion	Active listening, asks doubts	Mention the signs and symptoms of CAD

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
6 a.	3min	explains the home care management on various aspects	❖ **CARE OF CHEST INCISION** • Provide sternal protection with chest pillow or chest binders while coughing as instructed by the surgeon. • Avoid touching, rubbing or scratching incision. Itchiness is a normal part of the healing process. Always wash hands. • Keep the surgical area clean and dry at all times. Incisions should be left open to the air once the draining stops. • Do not apply oils, creams or lotions to incision unless your doctor tells you it is okay. • Protect incision from the sun for one year. Sunlight may cause the scar to become darker and more visible. • Wear clothing that will allow the incision to breath.	Power Point Slide	lecture and discussion	Active listening, asks doubts	explain the home care management on various aspects

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			• **NOTE**: Check incisions every day for signs of infection. Seek medical attention, if your incisions: ❖ Start oozing thick yellow or green drainage ❖ Feel warm to touch and are getting red. ❖ Start to come apart where the skin edges come together. ❖ Start oozing foul smelling drainage. ❖ Become more painful. ❖ If you have a fever of 38 degrees C or higher for more than 24 hours.				
b.	2 min		❖ **CARE OF LEG INCISION** Continue to wear stockings or crepe bandages advised in the hospital. These should be worn as long as swelling persists during the day and removed in the evening before going to bed.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
c.	3min		• Lift your feet up with a help of a low stool while in a sitting position &If in lying down, put pillows under the legs and feet. • Do not cross legs. If swelling persists or worsens, notify your doctor. ❖ **BATHING** • Bath can be taken as long as the wound is not draining. Avoid hot water for bathing. • Shower in tepid or warm water in a seated position to save energy and reduce the chance of falling. • Avoid aiming the showerhead at incision (i.e. shower with your back to the shower head). • Gently pat the incision with a clean towel. Do not rub the area.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
d.	2 min		• Apply a new dressing only if the incision is draining & if instructed by doctor specifically. ❖ **DRESSING** • Choose loose-fitting clothes as they are easier to take on and off. . • Thread belts through belt loops before putting on pants or a skirt to prevent reaching behind. • Dress while sitting as it is easier and place articles within reach. • Do not reach behind to put on a coat, shirt, or bra. Instead, keep the arms in front and reach across the body to pull items around the back or neck. Try to keep the elbows pointing in front or towards the ground.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
e.	3 min		❖ **DIET MANAGEMENT** Lack of appetite, mild nausea & constipation are common after surgery and gradually declines. **Restricted foods** • **Caloric Restriction** Total calories may be changed to increase, decrease, or maintain your weight as necessary. • **Foods high in cholesterol & saturated fats to be avoided** Liver, meats, egg yolks, butter and cheeses. Coconut, cocoa, fried foods. • **Foods High in Sodium (Na+) Content to be avoided** Papads, Pickles, dry fish, potato chips, salted popcorn, and all packed food items, soups.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			• **Concentrated Carbohydrate Restriction** Sugar and concentrated sweets and all beverages. • **Avoid caffeine intake after surgery.** ❖ **Allowed foods** • **Foods high in monosaturated and polyunsaturated fats** Meat without skin, protein foods, low fat dairy products, and fatty fish (salmon, tuna). Olive oil, canola, groundnut oil. • **Fruits and Vegetables** Fruits rich in antioxidants include berries, citrus fruits, apples, tomatoes and sweet potatoes. (if diabetes restriction to be done) leafy greens, carrots.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
f.	2 min		• **Whole Grains & Fibers** • Oatmeal, whole grain bread, green leaves. ❖ **EXERCISES** • Continue your warm-up by walking slowly for 5-10 minutes • Cool down at the end of the walk with another 5-10 minutes of slow walking. • Exercise at least 5times a week & increase the walk by 2 minutes per day to the target zone of 30min walk. • Abdominal breathing, incentive spirometry and deep breathing and coughing exercise should be carried out. • Do progressive muscle relaxation exercises slowly before starting the walk in comfortable sitting position such as neck stretch, shoulder shrug, elbow circles, arm raises, ankle pumps, knee extension and				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			flexion. • Avoid exercising when angry or upset. • Wear loose, comfortable clothing and a good pair of walking shoes. Good foot support is important. • Once confident and feel walking alone, carry a cell phone in case of emergency. Avoid walking in remote or hard to reach areas. Take water while going out. • Stop exercising ,if any of these symptoms: ➢ pain/discomfort in the chest, neck, jaw, arms. ➢ excessive sweating, nausea, dizziness ➢ decreased coordination. • Walking exercises are to be followed continuously without restrictions.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
g.	2 min		❖ **ACTIVITIES** **Sternal protection** • Do not use arms to get out of bed, a chair, or a car for 8-12 weeks. • Avoid lifting, pushing and pulling weights(e.g. lifting groceries, small children, pets, etc.) • Avoid bending too far forward & reaching behind to put your arms through shirt sleeves. • Avoid sitting for long periods in a chair without armrests. **Saving energy** • Allow plenty of time to complete your task; plan the work prior and do not rush. • Avoid heavy straining or breath-holding (e.g. bowel movements).				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			• Fresh fruits, drinking 6 to 8 glass of water daily and fiber intake is recommended. • Use stool softeners or laxatives If prescribed by the doctor to prevent constipation. **Stairs and hills** • Take time and rest when needed. • Take an assistance when going upstairs. • Avoid uneven ground and beach walking for 6-8weeks and until the balance and endurance improves. **Strength activities** • Light to moderate level strength activities can be safe & before beginning check with doctor on review. • Strength activities work helps the				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
h.	2 min		muscles against resistance • Regular strength training, combined with aerobic activities, can improve muscle strength. ❖ **LIFE STYLE MODIFICATIONS** **Habits** • Smoking & alcohol should be avoided to prevent heart condition getting worsening. **Sleep** • Sleep is preferable and most comfortable, on your back for 6-8 weeks after surgery. You may sleep partially on side if need to. • Avoid long naps. • Take warm milk before going to bed. • Talk to the doctor if you continue to				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			have sleep problems that are getting in the way of your recovery.				
i.	2 min		**STRESS MANAGEMENT** • Reading books, Watching TV, or listening to music helps to reduce stress. • Talking with the Spiritual Care Worker, family & friends can reduce stress. • Limit visitors and screen phone calls & setup a particular visiting hours at home. • Recognize stressful situations & learn ways to control negative emotions. • Conversation, regular social outings, sharing thoughts and listening to music can reduce stress. • Practice laughing therapy & humour sense in a situation to loosen up and enjoy life.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
j. .	2 min		• Find a quiet place and time to relax. ❖ **RETURNING TO JOB AND TRAVELLING** • Expected to be off work for 8-12 weeks. Get the confirmation with the surgeons about the return to work date. • The length of time to be off is determined by the recovery and the type of job. **Travel** • Keep all of your medications while on travel • If sitting for long periods, get up, walk and stretch the legs at least once an hour. This helps to prevent blood clots.				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
k.	2 min		**Driving** • At follow-up visit, confirm with surgeons when to start driving. • Wear seat belt at all times. • On long drives, stop every hour to stretch your legs. This helps prevent blood clots. • Avoid talking or taking sleeping pills while on driving. ❖ **RESUMING SEXUAL ACTIVITY** • Talk with the doctor about any concerns or questions with your partner about resuming sexual activity. • Talk to your partner about the concerns that helps with closeness.. • Sternal protection during sexual activity is important. Find a position that does not put pressure on the chest and does				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
l.	2 min		not need support from the arms. Safe positions include side-lying, patient on bottom and seated upright. • Avoid sexual activity after a large meal or after exercising. ❖ **FOLLOW -UP** • Take medications as per doctor's discharge advise. • Do not miss the dose or double dose at any cause. • Discharge summary and other investigation records, if carried out in any other hospital under emergency condition should be brought during review. • Self monitoring measures such as temperature, heart rate, blood pressure, sugar level and fluid intake amount can				

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			be self recorded and maintained at home. • Seek medical attention immediately if signs of any discharge from wound site, swelling, excessive sweating, fatigue, chest pain, dizziness and fever occurs. • Visit the doctor as per appointment schedule given prior to your discharge. **RECAPTULATION** These instructions are advised to be followed at home after discharge to prevent post-operative complications. The information guide helps you to gain knowledge regarding home care management after Coronary Artery Bypass Graft surgery and to serve as a guide to help you keep your heart healthy.				
		recapitulates the topic on home care management of CABG patients					

S. NO.	TIME	BEHAVIOURAL OBJECTIVE	CONTENT	AV AIDS	TEACHER ACTIVITY	LEARNER ACTIVITY	EVALUATION
			SELF –REFLECTION • The health teaching given was very informative for the patients, as they were interested to know about the importance of home care management after the surgery with regards to their progression of health status. • The patients were able to gain knowledge thereby clarifying their doubts regarding homecare management. • The teaching was helpful for me to know the patients needs and problems in depth, so that it could be incorporated in future.				

APPENDIX – G

LETTER SEEKING EXPERTS OPINION AND SUGGESTION FOR THE CONTENT VALIDITY TOOL

FROM

Mrs. Amudha. V
M.Sc. Nursing
MMM College of Nursing
Mogappair West
Chennai -600060.

TO _____

_____

_____

Forward Through

The Principal
MMM College of Nursing
Mogappair West
Chennai- 60.

Respected Sir/ Madam,

Sub: Expert opinion for content validation of research tool.

I, Mrs. Amudha. V, M.Sc Nursing student (Medical and Surgical Nursing) of MMM College of Nursing, request your good self, if you could kindly accept to validate my research tool on topic **"An experimental study to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems of the post CABG patients at MMM Hospital in Chennai".**

I would be obliged if you would kindly affirm your acceptance to the undersigned with your valuable suggestion on this topic. I shall send details of my study along with the research tool.

Thanking you in anticipation.

Yours Sincerely

Amudha.V

LIST OF EXPERTS

MEDICAL EXPERTS

1. Dr. Rajan

Director - Cardiac Surgery,

Institute of Cardio Vascular Disease,

MMM Hospital, Chennai.

2. Dr. Anbarasu Mohanraj

Senior Consultant- Cardio Thoracic Surgeon

MMM Hospital, Chennai.

3. Dr. Dinesh Kumar

Medical Superintendent

MMM Hospital, Chennai.

4. Dr. Latchumana Dhas

Senior Consultant Cardiologist

MMM Hospital, Chennai.

MEDICAL AND SURGICAL NURSING EXPERTS

1. Mrs. Kavitha

Associate Professor

MIOT college of Nursing, Chennai.

2. Mrs. Annamma Jacob

Associate Professor

Josco college of Nursing, Kerala.

3. Mrs. Rekha.S

Associate Professor

Josco college of Nursing, Kerala.

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs.Amudha.V,M.Sc(Nursing) at MMM College of Nursing,affliated to the Tamilnadu Dr.M.G.R.Medical University whose data collection tool and the topic ,"A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at MMM hospital,Chennai"is being validated by me and I have suggested the necessary changes to execute.

Signature of the expert

Place Chennai

Designation and address

DIRECTOR CARDIAC SURGERY
MMM

Date 7.7.2016

Dr. S. Rajan
Director - Cardiac Surgery
Institute of Cardio - Vascular Diseases
Madras Medical Mission
Chennai - 600 037.

CONTENT VALIDITY CERTIFICATE

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Signature of the expert

Place CHENNAI

Designation and address

Date 7/7/2016

Dr. ANBARASU MOHANRAJ, MS.,DNB.,MCh.
Reg. No: 55476
Senior Consultant-Cardiothoracic Surgeon
The Madras Medical Mission
Chennai-600 037.

THE MADRAS MEDICAL MISSION

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs.Amudha.V,M.Sc(Nursing) at MMM College of Nursing,affliated to the Tamilnadu Dr.M.G.R.Medical University whose data collection tool and the topic ,"A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at MMM hospital,Chennai"is being validated by me and I have suggested the necessary changes to execute.

Signature of the expert

Place CHENNAI

Designation and address

Date 8.7.2016

Dr. M. DINESH KUMAR, MBBS, MD
Registration No: 65230 (TN Medical Council)
Medical Superintendent
The Madras Medical Mission
No. 4A, Dr. J.J. Nagar, Mogappair East,
Chennai-600 037.

THE MADRAS MEDICAL MISSION

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs.Amudha.V,M.Sc(Nursing) at MMM College of Nursing,affliated to the Tamilnadu Dr.M.G.R.Medical University whose data collection tool and the topic ,"A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at MMM hospital,Chennai"is being validated by me and I have suggested the necessary changes to execute.

Signature of the expert

Dr. K. LATCHUMANADHAS, MD.DM.
Sr. CONSULTANT CARDIOLOGIST
REGD. No. 44990
THE MADRAS MEDICAL MISSION
CHENNAI - 600 037.

Designation and address

Place CHENNAI

Date 8.7.2016

MADRAS MEDICAL MISSION NO 1681

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs.Amudha.V, M.Sc (Nursing) at MMM College of Nursing, affiliated to the Tamil Nadu Dr.M.G.R. Medical University whose data collection tool and the topic, "A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post discharge problems of post-CABG patients at MMM Hospital, Chennai" is being validated by me and I have suggested the necessary changes to execute.

Place: Chennai

Date: 15/7/2016

Signature of the Expert

Designation and Address

Associate Professor
MIOT College of Nursing
Chennai-89

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs. Amudha. V, M.Sc (Nursing) at MMM College of Nursing, affiliated to the Tamilnadu Dr. M.G.R. Medical University whose data collection tool and the topic, **"A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post - discharge problems of post CABG patients at MMM hospital, Chennai"** is being validated by me and I have suggested the necessary changes to execute.

Place: Kulasekara

Date: 28/8/2016.

Signature of the expert 28/8/2016.

Designation and address

ANNAMMA JACOB.
M. Sc (N) M. Phil
ASSOCIATE PROFESSOR.
DEPT. OF MED. SURG. NSG,
JOSCO COLLEGE OF NSG
EDAPPON PANDALAM
KERALA STATE.

JOSCO COLLEGE OF NURSING EDAPPON JOSCO JN PANDALAM

CONTENT VALIDITY CERTIFICATE

This is to certify that Mrs. Amudha. V, M.Sc (Nursing) at MMM College of Nursing, affiliated to the Tamilnadu Dr. M.G.R. Medical University whose data collection tool and the topic, **"A prospective study to assess the effectiveness of information guide regarding home care management on knowledge and post - discharge problems of post CABG patients at MMM hospital, Chennai"** is being validated by me and I have suggested the necessary changes to execute.

Place: PADALAM

Signature of the expert

Date: 27/8/2016

Designation and address

Mrs. REKHA. S
Asso. PROFESSOR
JOSCO COLLEGE OF NURSING,
EDAPPAN, PANDALAM

CERTIFICATE FOR ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the study executed by Ms.Amudha.V. M.Sc. Nursing II year student in MMM College of Nursing on the topic **"Effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at selected hospital in Chennai."** affliated to The Tamil Nadu Dr.M.G.R. Medical University, Chennai is edited for English language appropriateness by Mrs. SASIKALA FERNANDO M.A.B.Ed

Signature and seal of the expert

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EXCEL ABROAD
No. 45, A Block, 3rd Avenue,
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CERTIFICATE FOR TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the study executed by Ms.Amudha.V. M.Sc. Nursing II year student in MMM College of Nursing on the topic **"Effectiveness of information guide regarding home care management on knowledge and post-discharge problems of post-CABG patients at selected hospital in Chennai."** affliated to The Tamil Nadu Dr.M.G.R. Medical University, Chennai is edited for Tamil language appropriateness by L. Geetha Venkatesh

ST. MOSES MATRICULATION SCHOOL
T.V.K. NAGAR
CHENNAI - 600 082

Signature and seal of the expert

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APPENDIX – J

PLAGIARISM REPORT

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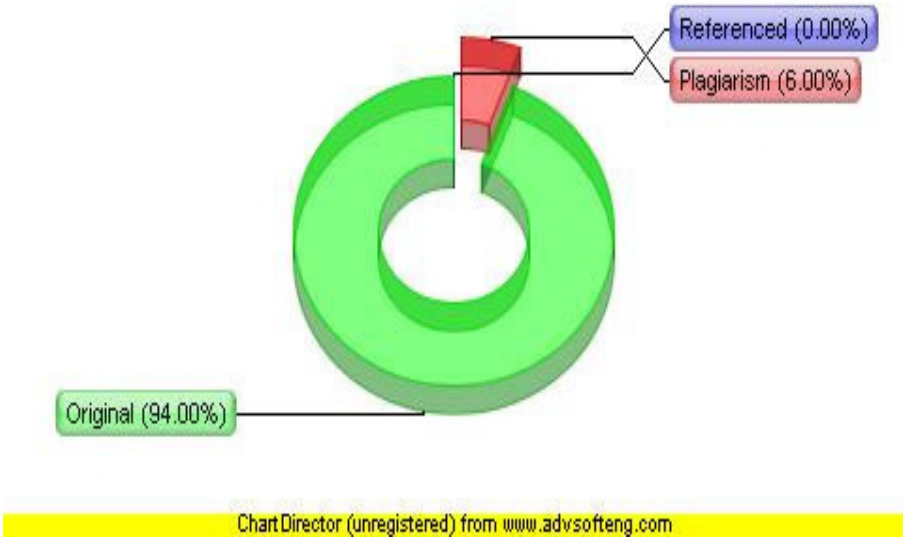

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